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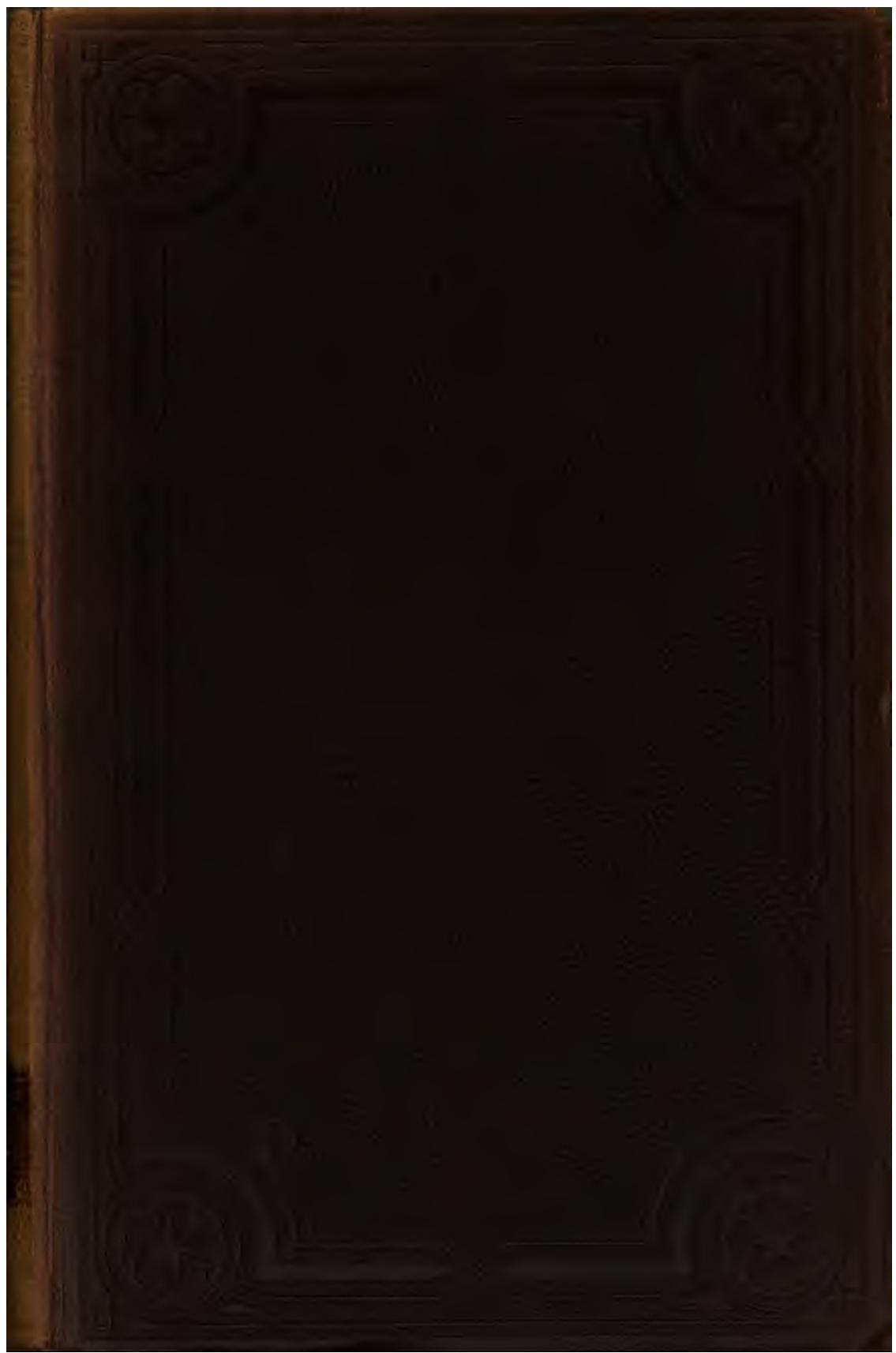
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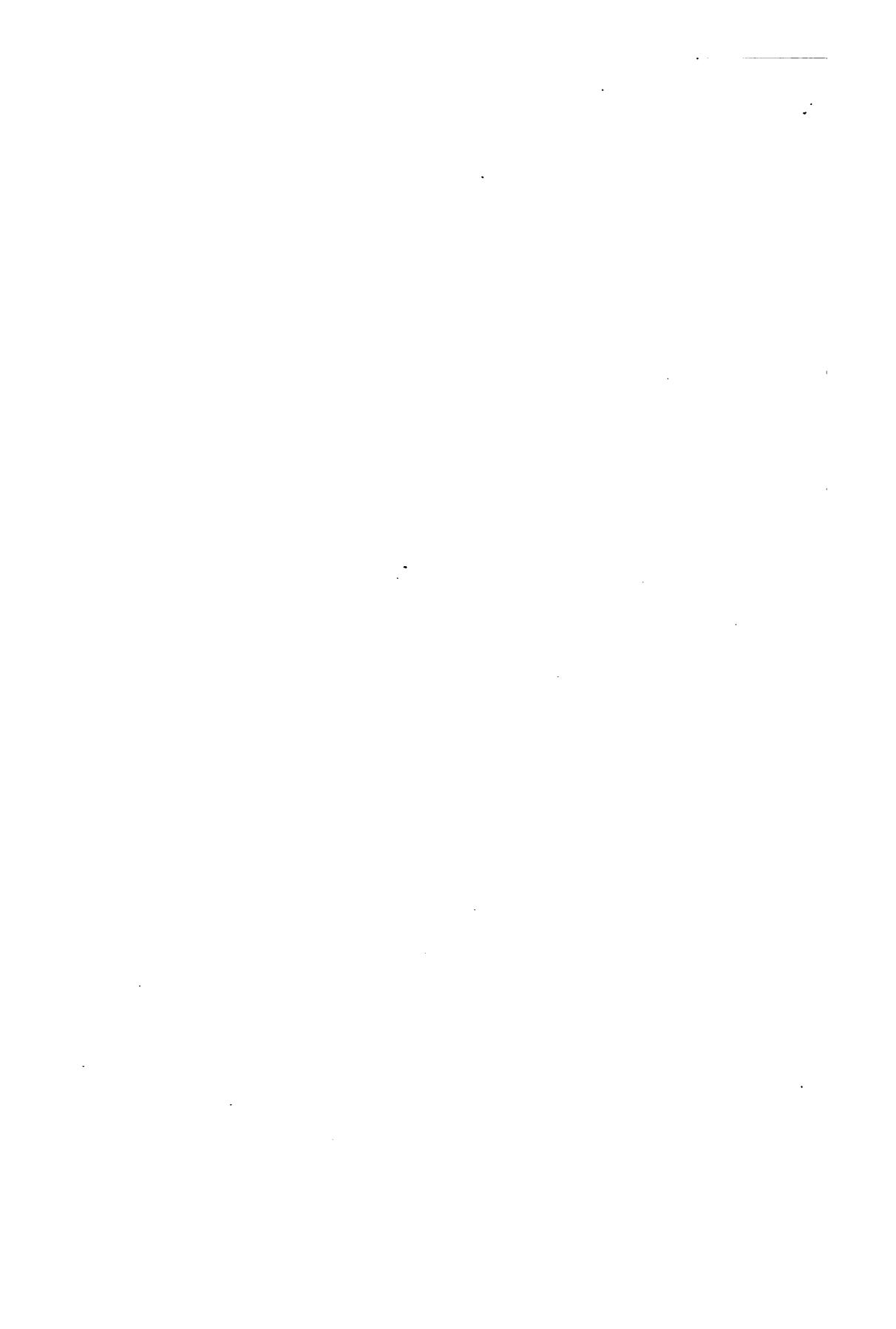
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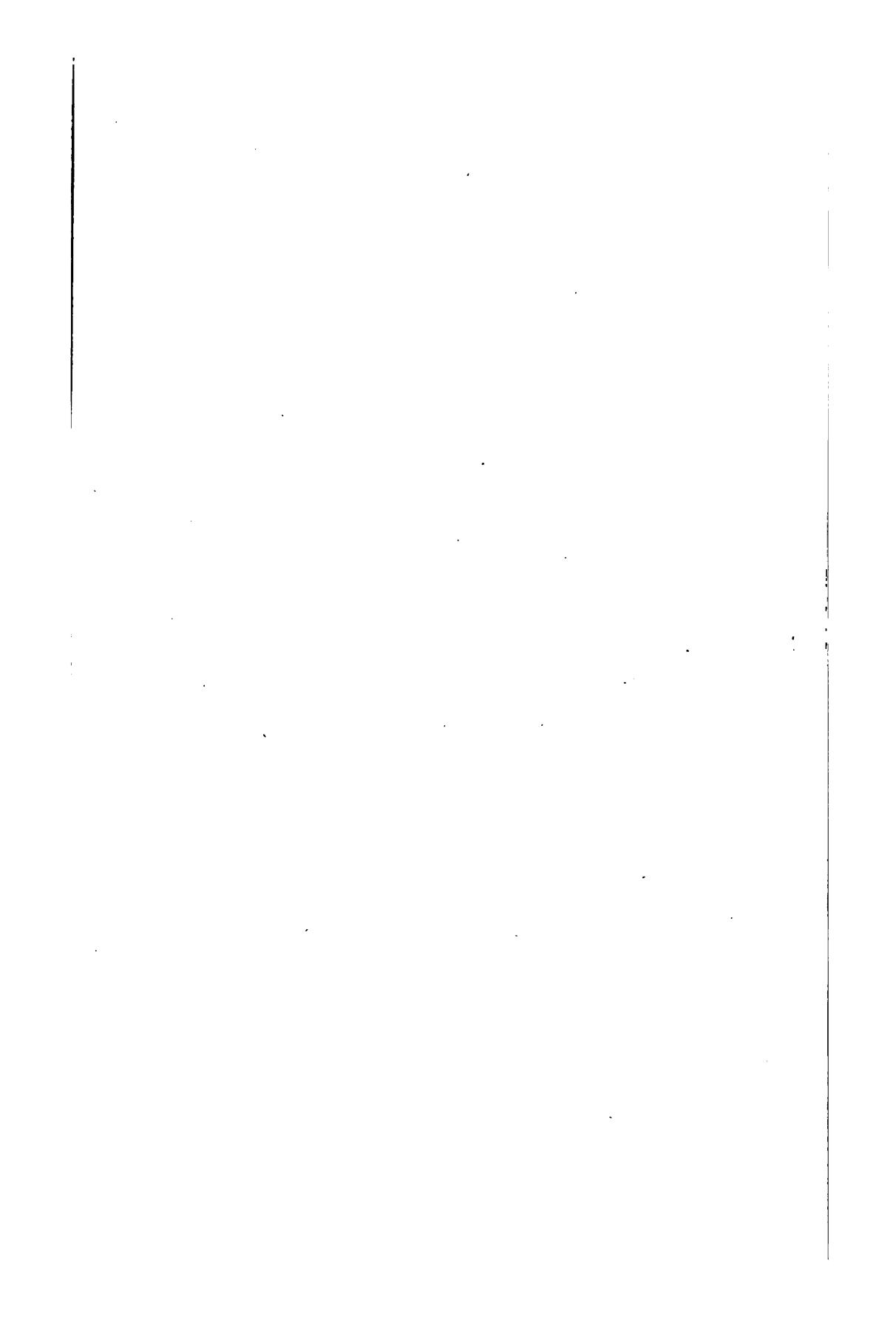


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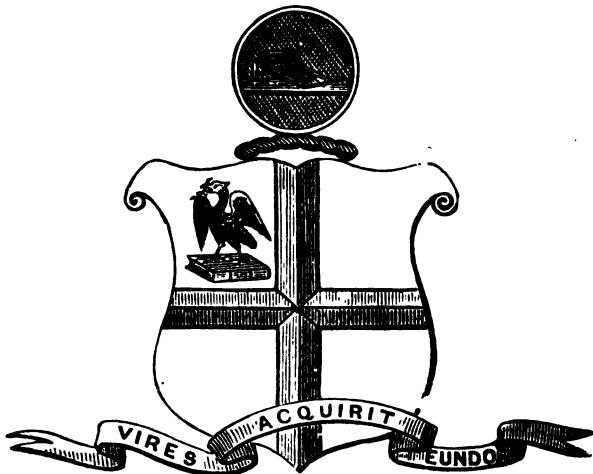
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 sham Park
- Nov. 12, 1880 Armour, Rev. Canon S. C., M.A., Merchant
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- Nov. 13, 1876 Ball, Geo. Henry, 15 *Gambier-terrace*, *Hope-*
 street
- Oct. 31, 1898 Bann, Miss, *Royal Infirmary*
- April 23, 1900 Bateman, J. Cecil, *Bank of Liverpool, Myrtle-*
 street
- Dec. 10, 1866 Benas, Baron Louis, J.P., 5 *Princes-avenue*,
 Ex-PRESIDENT
- Jan. 9, 1882 Benas, Phineas A., 5 *Princes Avenue*
- Feb. 6, 1882 Birchall, Charles, *Church-street, Egremont*
- Jan. 25, 1864 Birchall, James, *Westminster-road*, *Ex-*
 PRESIDENT
- Oct. 15, 1894 Blochwitz, Max, 35 *Avondale-road*
- Oct. 18, 1897 Bower, Miss M., Hahnemann Hospital, *Hope-*
 street
- Oct. 30, 1899 Bradley, Mrs., 13 *Chalmer-street*
- Oct. 7, 1895 Bramwell, Miss, Eye and Ear Infirmary,
 Myrtle-street
- Oct. 31, 1892 Brown, A. Theodore, *The Nunnery, St.*
 Michael's Hamlet

- Oct. 18, 1869 Brown, J. Campbell, D.Sc., F.C.S., Professor of Chemistry, University College, 8 *Abercromby-square*
- Nov. 12, 1894 Brown, Mrs. Musgrave, 21 *Mulgrave-street*
- Jan. 7, 1884 Calder, Miss Fanny, 49 *Canning-street*
- Nov. 3, 1862 Cameron, John, M.D., F.R.C.P., Physician to the Royal Southern Hospital, 4 *Rodney-street*
- Oct. 1, 1894 Candlin, W. J., 48 *Prussia-road, Hoylake*
- Oct. 15, 1894 Cannings, Miss Edith, South Liverpool School for Girls, *Dingle-bank*
- March 4, 1872 Carter, W., M.D., B.Sc., LL.B. (Lond.), F.R.C.P. (Lond.), 78 *Rodney-street*, Ex-PRESIDENT
- Jan. 29, 1894 Case, R. H., B.A., 88 *Mulgrave-street*
- Oct. 3, 1898 Chevasse, Geo. F., *The Bodega, Dale-street*
- Oct. 18, 1869 Cook, Henry James, J.P., *Byrom-street*
- Oct. 6, 1863 Crosfield, William, J.P., 6 *Stanley-street* and *Annesley, Aigburth*.
- Jan. 23, 1899 Cummings, Wm. John, 12 *Palace-chambers*, 21 *Victoria-street*
- Feb. 23, 1891 Curwen, Geo., *Anglesea-terrace, Waterloo*
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- Nov. 12, 1883 Daly Chas., Northern Assurance-chambers, *Tithebarn-street*
- Nov. 12, 1886 Davies, E., F.C.S., F.I.C., The Laboratory, 28 *Chapel-street*, Ex-PRESIDENT
- Dec. 10, 1883 Davey, Wm. J. (Messrs. Elder, Dempster & Co.), African-chambers, Water-street, and Holmleigh, Grassendale
- Oct. 4, 1897 Dodds, T. L., J.P., Charlesville, Birkenhead
- Nov. 28, 1892 Douglas, Robt. R., 150 Bedford-street South
- Nov. 18, 1889 Duncan, W. A., Great Charlotte-street
- Nov. 14, 1887 Eastley, Richard, Superintendent, Meter Department, Liverpool United Gas-Light Co., 156 Bedford-street

- March 21, 1870 Edwards, Edward E. (Smith, Edwards & Co.),
20 Chapel-street
- Oct. 15, 1883 Edwards, Frederick Wilkinson, M.S.A.,
Amoret House, Balliol-road, Bootle
- Oct. 17, 1898 Edwards, R., 10 Oxford-street
- Nov. 16, 1891 Ellis, John W., M.B., F.E.S., 18 Rodney-
street
- Nov. 17, 1890 Farrie, Hugh, 122 Bedford-street
- *Dec. 13, 1852 Ferguson, William, LL.D., F.L.S., F.G.S.,
Kinmundy House, near Mintlaw, N.B.
- Oct. 5, 1891 Fletcher, J. H., 17 Tarleton-street, and
9 Green Lawn, Rock Ferry
- *Mar. 19, 1885 Foard, James Thomas, 21 Lancaster-road,
Birkdale
- Oct. 29, 1888 Forster, Walter P., 17 Tarleton-street
- Oct. 17, 1899 Gay, W., M.D., 177 Grove-street
- Nov. 2, 1896 Gilbert, George, 65 Bold-street
- *Dec. 12, 1892 Gladstone, R., Junr., B.C.L., M.A., Vale-road,
Woolton
- Oct. 17, 1898 Glazebrook, Prof. R. T., M.A., F.R.S., Uni-
versity College
- Oct. 29, 1877 Green, Robt. Frederick, 66 Whitechapel
- Nov. 14, 1892 Green, Wm. McQuie, *Rosemere, Grassendale*
- Oct. 17, 1899 Griffiths, Miss Margaret, 20 Salisbury-road,
Wavertree
- Oct. 17, 1899 Griffiths, Miss Nelly, 20 Salisbury-road,
Wavertree
- April 20, 1891 Hale, Miss, Lady Principal, Edge Hill
College
- Oct. 7, 1895 Hamilton, Mrs., 92 Huskisson-street
- Nov. 16, 1891 Hampson, R. A., 10 Sunnyside, Princes
Park
- Dec. 10, 1883 Hargreaves, Jas., F.C.S., F.A.S., Peel House-
lane, Farnworth-by-Widnes
- Oct. 17, 1892 Harley, George, 1 Water-street
- Oct. 1, 1894 Hawkes, A. E., M.D., 22 Abercromby-square

- Jan. 7, 1895 Higgins, Miss Maud Longuet, 79 *Bedford-street South*
- Oct. 17, 1898 Hinchcliffe, Mark, 104 *Upper Hill-street*
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- Nov. 13, 1899 Hoare, Miss, *Oak Hill Park, Old Swan*
- Oct. 30, 1893 Holt, Alfred, *Crofton, Sudley-road, Aigburth*
- *Dec. 14, 1862 Holt, Robert Durning, J.P., 54 *Ullet-road*
- March 10, 1879 Hughes, John W., *Old Church-yard, Allerton*
- Feb. 20, 1882 Hunter, Hugh, 25A *Duke-street*
- Oct. 4, 1897 Jackson, J. Hampden, F.R.G.S., *Westdene, New Brighton*
- Jan. 26, 1863 Johnson, Richard C., F.R.A.S., 54 *Fern-grove*
- Nov. 27, 1899 Johnson, B. S., 3 *Merton-road, Bootle*
- Feb. 24, 1868 Jones, Charles W., J.P., *Field House, Wavertree*
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- Oct. 7, 1895 Jones, Mrs. Thos., 29 *Oxford-street*
- Oct. 17, 1892 Jones, William Wastell, 20 *Water-street*
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- Nov. 28, 1898 Klein, Hon. Mrs. de Beaumont, *Montford House, Alexandra-drive*
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park, Waterloo
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- Oct. 15, 1883 Sephton, Mrs., 90 *Huskisson-street*
- Oct. 18, 1897 Shelley, Roland J. A., *Seymour-road, Broad-green*
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- 23.—1897 Henry Longuet Higgins (care of Messrs. Ashurst, Morris, Crisp & Co.), 17 *Throgmorton street, London, E.C.*
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ADDITIONS TO THE LIBRARY.

ACADEMIES AND PERIODICALS.

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| GREENE (C. S.) | The university of California 8°. | 1898 | |
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| | Adjustment of engineering field instruments. 8°. | 1898 | |
| | Report of tests of macadam stone | 8°. | S.A. |
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- DUBLIN. Royal Irish academy.
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- GOTHENBURG. Göteborgs högskola.
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Transactions, vol 10, pts. ii-iv 3 pts. 8°. 1899
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 —— North-western and midland sanitary inspectors' association.
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 —— The engineering magazine, vell. 17, 18 2 vell. 8°. 1899-1900
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 —— Institution of civil engineers.
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 BARR (A.) Application of mechanics to engineering practice (*pph.*) 8°. 1899

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| Journal (<i>Botany</i>), voll. 26, no. 178; 34, nos. 236–239 | 5 pts. 8°. 1899 |
| — (Zoology), vol. 27 | 8°. 1900 |
| Proceedings, 111th session, 1898–99 | 8°. 1899 |
| List of the society | 8°. 1899 |
| — Motor-car world, vol. 1, no. vi | 4°. 1900 |
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| — Royal Asiatic society of Great Britain and Ireland. | |
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| — Royal geographical society of London. | |
| Proceedings, voll. 1–14 | 14 voll. 8°. 1879–92 |
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| — Royal institute of British architects. | |
| Journal, 3rd series, voll. 6, nos. vi–xx; 7, nos. i–x 25 nos. 4°. 1899–1900 | |
| Kalendar, 1899–1900 | 8°. 1899 |
| — Royal meteorological society. | |
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| — Royal microscopical society. | |
| Journal, 1899; 1900, pts. i–iii | 8°. 1899–1900 |
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| Proceedings, voll. 64, nos. 406–412; 65; 66, nos. 424–431 | 8°. 1899–1900 |
| Reports to the malaria committee, 1899–1900 (<i>pph.</i>) 8°. 1900 | |
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 Bulletins, nos. i, ii 2 pts. 8°. 1898
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- MARSEILLES. Faculté des sciences de Marseille.
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- MELBOURNE. Royal Society of Victoria.
 Proceedings, new series, vol. 11, pts. i, ii 8°. 1898–99
- MEXICO. Instituto geológico de México.
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- MILAN. Reale instituto lombardo di scienze e
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- PARIS. École polytechnique.
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| Journal, 2e série, pt. iv | 4°. 1898 |
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- PENZANCE. Royal geological society of Cornwall.
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| Transactions, vol. 12, pts. iv, v | 2 pts. 8°. 1899-1900 |
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- PHILADELPHIA. Academy of natural sciences.
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| Proceedings, 1898, pt. iii; 1899 | 8°. 1898-99 |
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- Franklin institute of the state of Pennsylvania.
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| Bulletins, 5e série, voll. 8, no. 5; 9-11; 12, no. i. | |
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| Bulletin, voll. 28, nos. vii-xii; 29, nos. vii-xii; 30 | |
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SCOTLAND. Mining institute of Scotland.

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SOUTHPORT. Meteorological department.

Reports, 1898, 1899 2 pts. 4°. 1899-1900
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Proceedings, vols. 44, 45 2 vols. 8°. 1898-99

TORONTO. Canadian institute.

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Annales, vol. 3 4°. 1899

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TRURO. Royal Institution of Cornwall.

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Division of biological survey. North American fauna, nos. xiv, xv 2 pts. 8°. 1899

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U.S. geological survey. Annual reports, 18th, 19th; 20th, pts. i, vi . . . 13 pts. in 17, la. 8°. 1897-99

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WASHINGTON, *Columbia.* National academy of sciences.

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— Naval observatory.

Reports of the superintendent, 1898, 1899.

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Annual report of the board of regents, 1896, 1897.

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Miscellaneous collections, vols. 39, no. 1170; 41, nos. 1171, 1173 3 pts. 8°. 1899

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Montgomeryshire, vols. 30, pt. iii; 31, pt. 1.

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ADDISON (W. I.) A roll of the graduates of the university of Glasgow 4°. *Glasgow*, 1898

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G. N. Plunkett and E. Hogan, 3rd ed. (*Irish Home
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- Pater ad filium, accedunt quatuor poemata laudata.
8°. Amstelodami, 1899
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TREASURER'S ACCOUNT, 1898-99.

The LITERARY AND PHILOSOPHICAL SOCIETY OF LIVERPOOL.

¶r.

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| 1898-99. | | | 1898-98 | |
| To Balance from 1897-98 in Bank | 32 8 11 | | By Royal Institution, One Year's Rent | 20 0 0 |
| " Subscriptions, viz.:— | | | " Printing and Stationery | 28 8 4 |
| 126 at £1 1 0 | £182 6 0 | | " Printers, Balance of Vol. 1897-98 | 15 8 0 |
| 16 at 0 10 6 | 8 8 0 | | " Printers, on Account 1898-99 Vol. | 35 0 0 |
| | | | " Mr. Gilbert Parker, Travelling Expenses | 8 8 0 |
| " Interest allowed by Bank | 0 16 2 | | " Refreshments | 22 7 8 |
| | | | " Lime Light | 2 2 0 |
| | | | " Lee & Nightingale, Advertising | 1 19 6 |
| | | | " Hon. Treasurer's Expenses | 8 16 8 |
| | | | " Late Hon. Secretary's Expenses | 0 4 10 |
| | | | " Hon. Secretary's Expenses | 0 18 0 |
| | | | " Hon. Librarian's extra Expenses, Account 1897-98 (not rendered until after previous Account closed) | 5 4 8 |
| | | | " Hon. Librarian's Expenses, 1898-99 | 5 6 2 |
| | | | " Balance Cash in Bank | 85 1 1 |
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| | | | | £173 14 1 |

Audited and found correct,
JAS. BIRCHALL,
R. C. JOHNSON.

2nd October, 1899.

PROCEEDINGS
OF THE
LIVERPOOL
LITERARY AND PHILOSOPHICAL SOCIETY.

EIGHTY-NINTH SESSION, 1899-1900.

ROYAL INSTITUTION, LIVERPOOL.

REPORT.

The Council have pleasure in congratulating the members on the successful completion of the eighty-eighth Session of the Society, and the continuance of its useful career.

Besides the Annual Meeting, thirteen ordinary meetings and two extraordinary meetings were held during the Session.

The Papers read were of general interest, and the Meetings were on the whole well attended, although the average attendance was somewhat less than that of the previous Session.

Early in the Session the Society had the pleasure of hearing Mr. Gilbert Parker, the well-known novelist, read an interesting paper on "The Art of Fiction."

During the Session 11 ordinary members were elected, 18 resigned, and 3 died. The total number is now 144.

Among the deaths is especially to be noticed that of Mr. Albert Julius Mott, F.G.S., who had been President

of the Society for three Sessions, 1872-3, 1873-4, 1874-5, and a member for nearly forty-nine years, during which he had done good service to the Society. Although he had left Liverpool some years ago to reside near Cheltenham, he still remained a member and preserved a warm interest in the welfare of the Society. A vote of condolence with his widow and family was passed by the Council, and communicated to Mrs. Mott by the Honorary Secretary.

The Society has added to its list of Honorary Members the name of the Rev. G. H. Rendall, M.A., Litt.D., who, while Principal of University College, was President during two Sessions, and who last year left Liverpool to be the Head-master of Charterhouse School.

In January a dinner was held in connection with the Society, at which the Right Hon. the Lord Mayor and Lady Mayoress (Wm. Oulton Esq. and Mrs. Oulton) were present.

Encouraged by the success of this gathering, the Council resolved to revive (experimentally) the old practice of holding an Annual Dinner in connexion with the Society; and it has now the pleasure to announce that Sir Robert Ball, the distinguished astronomer, has accepted the invitation of the Society. The Dinner will be held on Wednesday, Dec. 13th. A proposal to inaugurate the Session 1899-1900 by a Conversazione on the 16th of October was also approved. The Council trust that these reunions will have the effect of drawing the members together and stimulating their interest in the work of the Society.

An offer of a prize of £5 for the best Essay, to be competed for by students of University College, was warmly accepted by the authorities of that institution, and there is prospect of a keen competition. The successful essay will

be read as a paper at one of the Society's meetings and subsequently published in the *Transactions*.

During the Session the Society resolved on the removal of the Library, for which it had no proper accommodation, and after some negotiations with University College, it was decided to transfer the books to the College Library. They have now been placed there in the custody of University College, but the members of this Society have the right of free access to them at all reasonable times.

In view of the slight diminution in membership, the Council urges all members of the Society to bring its claims under the special notice of their friends.

ORDINARY MEETINGS.

I. October 16, 1899. The President, Rev. E. N. Hoare, in the chair. The meeting took the form of a Conversazione, to which a large number of guests were invited. The President read his address on "Some Conditions of Progress." An interesting collection of curios, literary and otherwise, was displayed for inspection, and subsequently a concert, followed by "Tableaux," was held. 200 members and friends were present.

II. October 30. The President, Rev. E. N. Hoare, in the chair. Dr. J. Birkbeck Nevins exhibited to the Society specimens of the current coinage of the South African Republic. Mr. G. H. Ball read a paper on "George Combe's Work entitled 'The Constitution of Man Considered in Relation to External Objects,' and its Influence on the Modern Study of Hygiene."

III. November 13. The President, Rev. E. N. Hoare, in the chair. Mr. R. C. Johnson, F.R.A.S., read a communication on the subject of the November Leonids. Mr.

T. L. Dodds read a paper entitled "John Addington Symonds and the Renaissance."

IV. November 27. The President, Rev. E. N. Hoare, in the chair. Paper by Mr. Richard Steel on "The Basis of Economics."

V. December 11. The President, Rev. E. N. Hoare, in the chair. Paper by Dr. J. Murray Moore on "The Sub-Conscious Mind: Its Normal and Supra-Normal Powers," illustrated by diagrams.

VI. January 8, 1900. The President, Rev. E. N. Hoare, in the chair. Dr. J. Murray Moore introduced a discussion on the twenty-four hours division of time. Mr. Richard Steel read a paper on "The Law of Imitation in Psychology." The Prize Essay of the Society, by Miss Margaret Dickin, on "Samuel Butler and his *Hudibras*," was read before the Society.

VII. January 22. The President, Rev. E. N. Hoare, in the chair. Paper by Miss C. I. Dodd on "Some Aspects of Hungarian Education."

VIII. February 5. The President, Rev. E. N. Hoare, in the chair. Paper by Rev. W. E. Sims on "Thomas de Quincey."

IX. February 19. The President, Rev. E. N. Hoare, in the chair. Mr. G. H. Ball made a communication on the comparative physique of the Boer and the Englishman. Mr. Richard Steel read a paper on "The Law of Imitation in Ethics, Religion, and Politics, and Its relation to Heredity."

X. March 5. The President, Rev. E. N. Hoare, in the chair. Mr. R. C. Johnson read a communication on the coming eclipse of the sun. Paper by Prof. Lodge, F.R.S., on "Modern Views of Matter;" the paper was illustrated by numerous experiments.

XI. March 19. The President, Rev. E. N. Hoare, in

the chair. Paper by Mr. J. R. Bryce Muir, M.A., on "The City, Ancient and Modern."

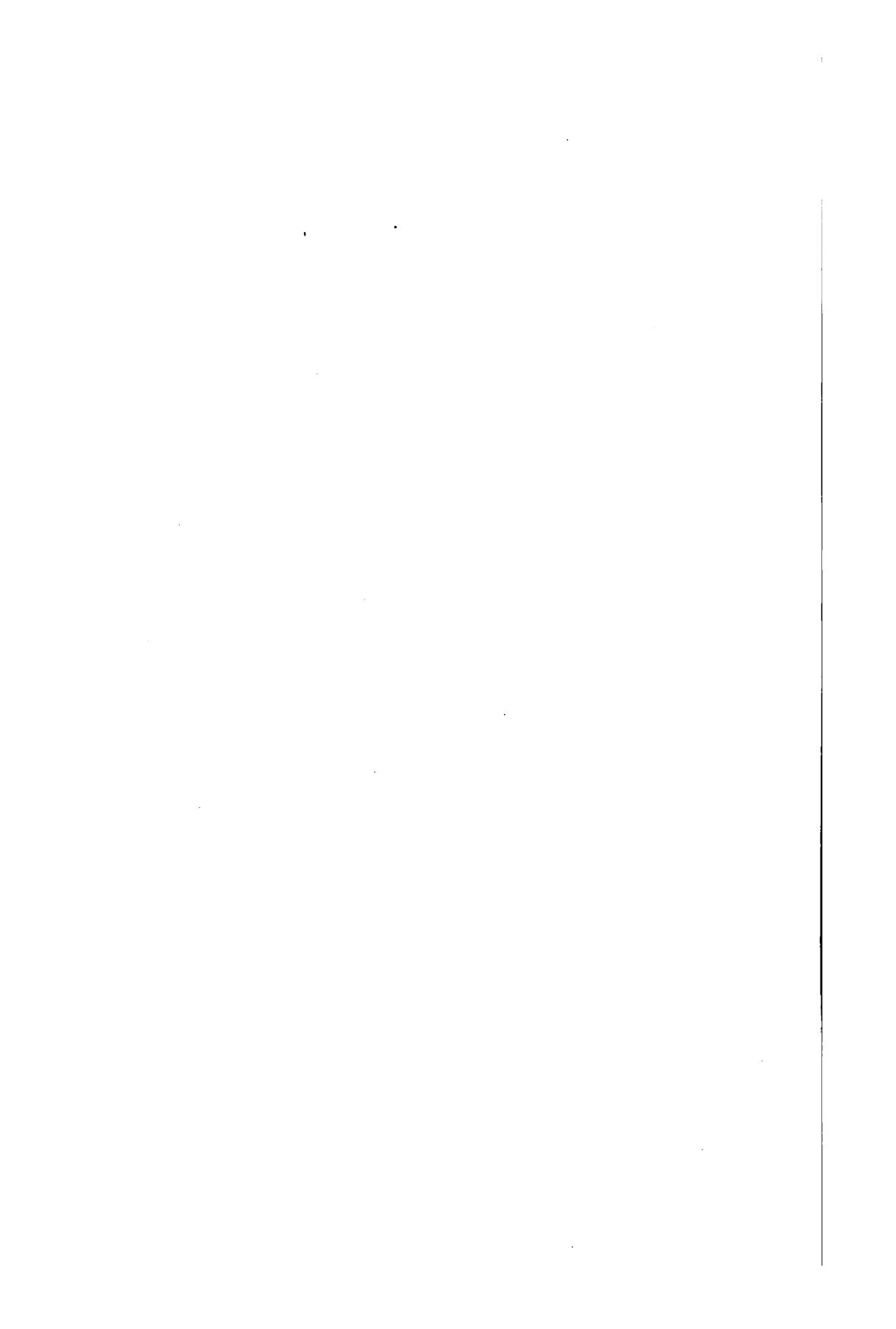
XII. April 2. The President, Rev. E. N. Hoare, in the chair. Dr. J. Ernest Nevins read a paper entitled "Indian Famines," illustrated by lantern slides.

XIII. April 23. The President, Rev. E. N. Hoare, in the chair. The election of President for the next session took place, and the Rev. E. N. Hoare was unanimously re-elected. Dr. J. Birkbeck Nevins read a communication on "The New French Coinage," and shewed illustrative specimens. He also shewed some coins of the South African Republic, completing the series shewn to the Society on October 30. Mr. Richard Eastley read a paper entitled "Ideals, their Use and Abuse." Mr. R. Steel read a note supplementary to his paper on the "Law of Imitation."

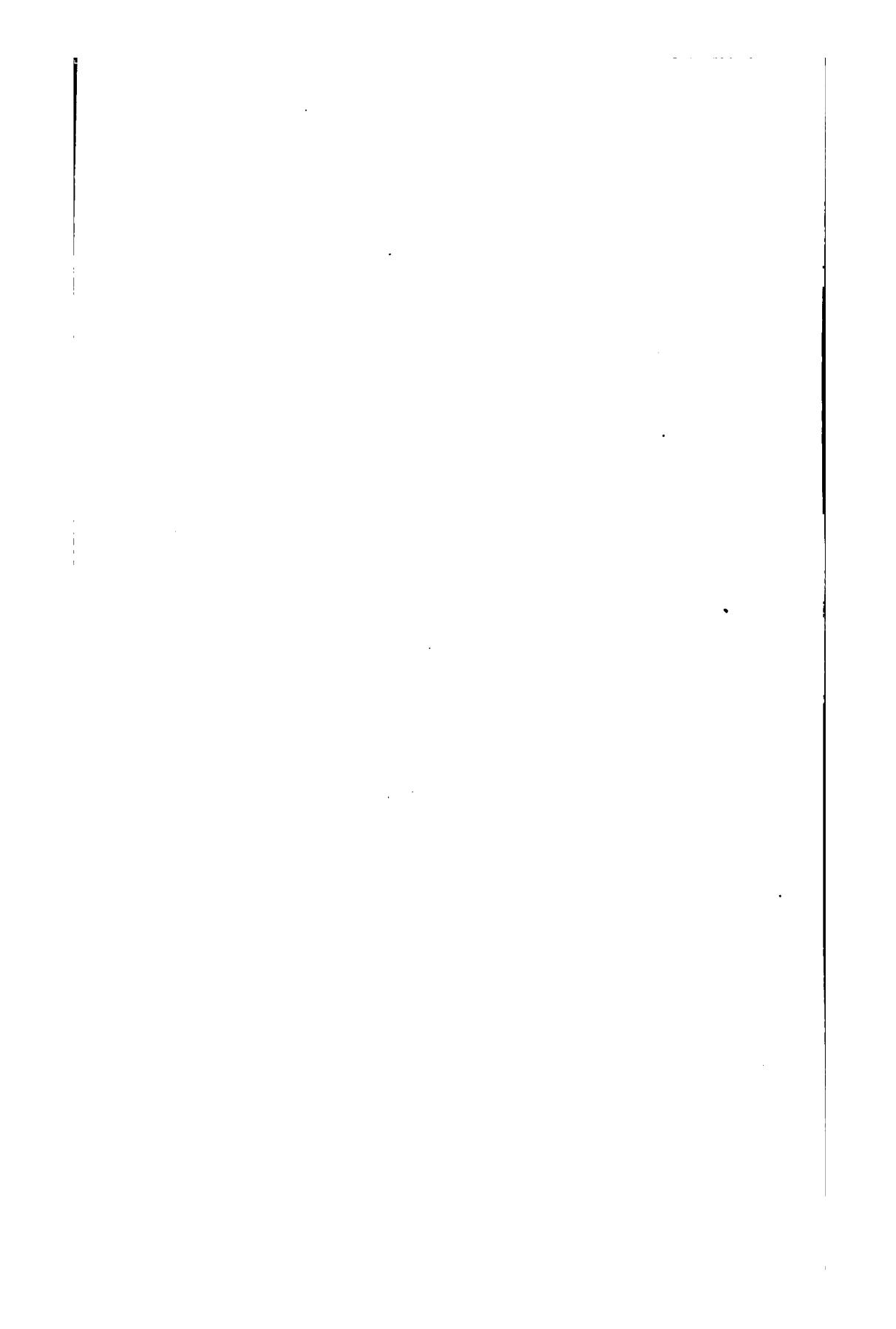
ORDINARY MEMBERS OF THE SOCIETY ELECTED DURING THE SESSION.

Miss M. Griffiths, Miss N. Griffiths, Dr. W. Gay, Mrs. Bradley, Mr. J. R. Bryce Muir, M.A., Prof. Oliver Lodge, F.R.S., Miss Hoare, Mr. B. S. Johnson, Rev. J. T. Mitchell, M.A., Dr. Wm. Permewan, Principal Dale, M.A., Mr. J. Cecil Bateman.

Attendances at the Meetings of the Society were as follows: 200, 45, 60, 24, 40, 35, 44, 31, 38, 500, 32, 68. 50.



PAPERS READ DURING THE SESSION.



SOME CONDITIONS OF PROGRESS.

By REV. E. N. HOARE.

If the question were to be put—Has the world really progressed, say, since the foundation of our own Literary and Philosophical Society in 1812? the general answer would, no doubt, be an emphatic—possibly a somewhat impatient—Yes. And to the further question, as to whether such progress might rightly be regarded as prophetic of the future—as a stage in an orderly and assured evolution of humanity—the affirmative response would not be appreciably less confident. The truth is, we have all been caught and are all being borne along—whether resisting or rejoicing—in the swirl of the current optimism.* We cannot open a newspaper without being informed, either editorially, or in the correspondence column, or in the reported speech of some eminent statesman or fellow citizen, that “this is a progressive

* **OPTIMISM.**—The word is here used in its loose, popular sense as indicating a belief that things are improving, and that they are bound (on the whole) to go on improving. It may scarcely be necessary to point out that this is not the philosophical meaning of the word. In philosophy Optimism means the doctrine, held by some of the ancients, enforced by Leibnitz in his *Theodicee*, and so cleverly illustrated by Pope that, of all possible worlds present to the Divine mind, this actual world was chosen as the best.

It may be said that these views involve one another. But this is not so. If the existing world is the absolute best it would still be the best, even though it were incapable of progress or only capable of what we call retrogression. On the other hand, the world might be progressive, even to the point of perfection, and yet not be the best of worlds—for conceivably the same goal of ultimate good might have been reached by some shorter and less thorny road.

The two views may also lead to very different practical results. The optimist of progress is encouraged to work towards betterment; but the philosophical optimist is tempted to acquiesce in things as they are. “If God could make no better world, is it for me to try and improve His work?”

A passionate, if unreasoned, belief in the future of the race is certainly characteristic of the best thought of the day. Innumerable illustrations might be given, but the following is quoted, not so much for its intrinsic weight as to show how this faith can maintain itself in the darkest places and find sustenance in the gloomiest day. It is of South Africa that Olive

age in which we live," that we must be moving on, that this or that creed, institution, or practice of yesterday is no longer "up to date," and so forth. Parties vie with one another in their professions of loyalty to this creed. Time was when the belief in progress was supposed to be a distinctive feature of liberalism; but the conservative of to-day will be hot to repudiate such an appropriation. While those other friends of ours, who are most scathing in their criticism of what we have hitherto been babbling about under the name of progress, are intoxicating themselves with splendid visions of the future. If things are not now for the best, they are soon *going to be*. Thus, whether we be all socialists or not, we are all of us avowedly—and more or less sincerely—optimistic in our outlook on the future.

Let us now inquire—(I) as to the causes that have evolved this state of popular sentiment; and (II) as to how far, and under what limitations, such a sentiment is likely to be justified by the event.

I. The persistent cheerfulness with which we face the twentieth century certainly needs accounting for, since in truth, it has survived "heavy blows and great discouragement." Regarded from the ideal point of view, the record of the nineteenth century is one of manifold

Schreiner writes:—"All earth is ours. And the day shall come when the stars, looking down on this little world, shall see no spot where the soil is moist and dark with the blood of man shed by his fellow-man; the sun shall rise in the east and set in the west and shed his light across this little globe; and nowhere shall he see man crushed by his fellows. . . . To-morrow's sun shall rise and it shall flood these dark koppjes with light, and the rocks shall glint in it. Not more certain than that rising is the coming of that day. And I say to you that even here, in the land where now we stand, where to-day the cries of the wounded and the curse of revenge ring in the air; even here, in this land where man creeps on his belly to wound his fellow in the dark, and where an acre of gold is worth a thousand souls, and a reef of shining dirt is worth half a people, and the vultures are heavy with man's flesh—even here that day shall come."—*Trooper Peter Halket*.

Such faith recalls the great prophets that were in Israel.

disillusionment. The ideas of the Revolution have had a hundred years of trial; and France, the mother of these ideas, is still held in labour pangs, nor hath she “wrought any deliverance upon the earth.” The series of beneficent enactments—from catholic emancipation onward—that marked the period of whig domination in England, can scarcely be said to have realised the glowing Eutopian visions of the great men who then fought in the van of progress for the cause of the common people. The prophetic pæans of universal peace and brotherhood that heralded the opening of the Hyde Park exhibition of 1851 are but murmurings of a far-off mocking music in our ears to-day; and, after half a century of warfare and suspicion, men are asking if life and property will be safe in the Paris of 1900.

And when the sociologist looks forth to the broad lands that lie beyond the oceans he finds these young communities reproducing, in some cases on an aggravated scale, the vices, the miseries, and the cruel anomalies of their ancestral homes. No new world has as yet arisen to redress the grievances of the old. There is no very potent inspiration in the literature or the art of these latter days; nor can it be said that the churches have garnered such a harvest as might have been expected from the splendid seed-sowing of the men who, in the earlier years of the century, made religion a living power throughout this land.

Whence then comes our hope? Why is it that, despite so many discouragements, men confidently gird themselves to the task of labouring for the betterment of their fellows? And I think the answer is—this grace we owe to Science. The marvellous achievements of all the practical sciences during the last few decades have not only kindled hope for the future, but have quickened in man a strange new

sense power* in the present. He no longer grovels at the rumbling of Nature's chariot wheels: rather, with a grave smile, he lays a dauntless, albeit a cautious, hand upon the neck of her fieriest coursers. "Ye are mine," he whispers, "destined from of old to own my sway and to subserve my purposes." As a consequence, no task to-day is deemed too stupendous to be undertaken; no rumoured achievement of Science is judged incredible. We expect new surprises daily, and time after time the expectation has been justified.

And while the actual conquests of Science have thus stimulated expectancy as to the future, its most wide-reaching theory has been found to open out a path in the same direction. For the doctrine of Evolution, long regarded with uneasiness by the moralist, now bids fair to be accepted as his sheet anchor. For, if it be true (it is argued), that all things have not remained as they were since the beginning of the creation—if in the physical universe there has been a gradual, orderly, and necessary development—why should not the same principle hold good in the spiritual and moral sphere? If the human organism has been slowly evolved through a long series of transformations in the past, why should not a like evolution of the intellectual, moral, and spiritual nature be even now in progress? And if hundreds of thousands of years rolled by while the physical organism was being built up into its final form (if indeed it be final), why should we be surprised or discouraged even though we fail to detect any traces of that higher evolution within the puny limits of the brief day of which history professes to tell the story?

* "The ethical progress of society," says Huxley, "depends, not on imitating the cosmic process, still less in running away from it, but in combating it." And he holds that the "solid foundation" for the hope that we may do this constitutes the chief distinction between ancient and modern times. "Our command over the course of non-human Nature is greater than that once attributed to magicians."—*Evolution and Ethics*.

You will observe that on the logical validity * of these and the like considerations I offer no criticism; I merely indicate them as factors in bringing about that cheerful and expectant state of mind that seems, upon the whole, to be characteristic of the thought and activity of the day.

II. In now passing to our second question it will not be necessary to consider in detail any of the various movements of recent years that have been generally described as "progressive," weighing them in the balance as to their immediate and ultimate results. Let it be conceded that there has been during the century a real progress, in the only worthy sense of the word—that is, not a mere movement of change, nor even a movement towards physical easement and corporeal comfort—but a movement towards essential betterment, towards the evolution of the man in man—the development, that is, of those human qualities that differentiate him from the

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other living organisms around him. I say, let the reality of this progress be conceded and it brings us at once to the question with which I desire more directly to deal to-night: Is there any rational basis for a formulated theory of human progress? Have we anything more substantial to build on than that elation of the spirit that has come in the train of certain conspicuous scientific triumphs, or the vague theory of a moral evolution, or the promptings of a philanthropy that hopeth all things?*

*ASPIRATION is evidence of *something*; but of *what* it is not so safe to say. The "high *a priori* road," that the existence of an idea is a witness to some corresponding reality at the back of it, though somewhat grass-grown now-a-days, is yet a path that leads towards the palace of truth. The method of argument applicable to the idea of God and the idea of immortality is also applicable to the idea of progress. Whence comes the idea, and how can you account for it better than by the hypothesis that there is some reality corresponding to it? That man is an aspiring animal, that the desire for progress differentiates him from other sentient creatures is thus picturesquely put by Henry George: "He is the only animal whose desires increase as they are fed; the only animal that is never satisfied. The wants of every other living thing are uniform and fixed. The ox of to-day aspires to no more than did the ox when man first yoked him. The sea-gull of the English Channel who poises himself above the swift steamer wants no better food or lodging than the gulls that circled round, as the keels of Cæsar's galley first grated on a British beach." Yes, we may grant that man would not have aspired had not progress been a realisable thing. But where and how to be realised? Is it through a higher life for the race on this actual earth—a life made possible through infinite labour of the past, patient sacrifice, and heaped-up experience? Or is the result, towards which all the storm and stress has been tending, only to be grasped in some supra-mundane mode of existence of which sense has no cognizance? This is the question between yesterday and to-day, between the old religion and that which has proclaimed itself as the new. Of course we may embrace both issues, or even hold one alternative in reserve. Thus R. Browning sings

I know there shall dawn a day—
Is it here on homely earth?
Is it yonder, worlds away,
Where the strange and new have birth
That Power comes full in play?

Is it here, with grass about,
Under befriending trees?
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Which star-flecks heaven's dark floor?

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7

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Are these progressive movements vouchers for the existence of a great stream of tendency which, despite its dead backwaters and bewildering eddies and fantastically reversed currents, is sweeping onward with ever increasing volume—aye, even though here it be cramped between narrowing rock-barriers, or dissipated yonder over the drear surface of apparently stagnant lagoons? Or shall we say they are but as sports on the face of a fickle tide that daily ebbs and flows, with meaningless murmur and babble, around the globe, anon gaining intensity or losing it, in accordance with the conjunction or opposition of cosmic forces that lie forever beyond man's care or ken?

At first sight, the appeal to history would seem to suggest this latter view. The tide of all that we call civilization—of philosophy and faith, of literature and art, of empire and of ordered freedom—has ebbed and flowed through many an age. Human power, in the strength of its achievement or the glory of its anticipation, has again and again swelled upward and onward like the crest of a sun-touched wave, only to be presently broken, scattered, lost in the confused backwash of an ignominious retreat. “There is nothing new under the sun, and we are not better than our fathers,” croaks the cynic or sighs the sentimentalist.

And yet it is in the study of the past that we find our best ground of hope for the future. For when we consider the phases of civilization that have been exhibited, either in classical or mediæval times, we soon become conscious of several points in which they differ essentially from the civilization of to-day. A few of these may be passingly referred to:—

(1). It is plain to us, looking back, that no former civilization had any real basis of stability. The great empires of antiquity—say Assyria and Persia—were of

insignificant dimensions compared to the unknown world that lay behind them. Consider Egypt, with that antique and mystic civilization that gazes upon us to-day, with its placid irony, from pyramid and sphinx and hieroglyphic tablet. What were these men but a little crowd gathered on the banks of the mysterious river that has ever been the life of their land? They were the fathers of civilization; yet were they but as a swarm of bees that depends from some bending twig in a vast garden. What was Greece, with all her splendour of philosophy and art and fulness of civic life, but a pin point—or, say rather, a diamond spark—shining forth from out a vast field of blackest night. And if Rome seemed more imposing in the plenitude of her power, what would a denizen of some other planet, looking down on the earth, have thought of her chances of enduring empire as his eye wandered northward to rest upon those vast and untamed tribes that even then were being massed, rank on rank, behind the Danube and the Rhine? Well might he sadly smile were his ear to catch the rhythmic music of the patriotic oracle with which the sweet singer of a proud imperialism won the plaudits of his people.

His ego nec metas rerum, nec tempora pono;
Imperium sine fine dedi.—(*Aeneid* I, 278-9).

But we know our world to-day. We can enumerate its tribes and estimate their strength. There is no longer the possibility of a great empire being overthrown by barbarism. No longer does any one nation, or language, or faith stand alone, holding on high the torch of light and liberty. Civilization has become international.

(2). And this remark leads us on to a consideration of the part played by science, both in securing that which has been already won, and in laying broad the foundations of a possible progress in the future. The ancients were

not our inferiors in intellectual grasp and subtlety; possibly they surpassed us in these qualities. But they lacked the material on which to build. It may be that a Greek philosopher might, by a process of mere thinking, have anticipated some of the achievements of modern science; but he could never have realised them for lack of tools (and the truth that is unrealised dies with the brain of its discoverer, or survives as a mere dry dogma on the lips of his disciples). Safe and lasting progress is only possible when it rests on the basis of physical fact. It was the invention of the printing press that rendered another eclipse of light and learning inconceivable. What science has once fairly won can never be lost; it becomes a vantage ground from which to issue forth to further victories. Short of some catastrophe (say a Martian invasion) coming on the world *ab extra*, it is practically impossible to imagine a conjunction of affairs through which all the great achievements of the mechanical and physical sciences should be forgotten or lost to mankind.

Again, we have to consider—and I venture to mark this as a most important factor—that it is modern science that has, for the first time in human history, rendered a really *human* life possible for the great mass of mankind. Ancient society was avowedly built up on slavery; and onward, even to this present day, the leisure, the ease, the refinement, the glory, the magnificence of the few has been purchased through the unremitting toil and debasement of the many. Comparisons have been made between the intellectual nimbleness of the average Athenian citizen and, say, of the average Liverpudlian; but it is too often forgotten that the worthy Attic gentleman, who spent his time in hearing or telling some new thing, in discussing polities or applauding eloquent speeches, could only do so because there was beneath him a servile class condemned

to ignorance and perpetual toil. So too with Rome. That Seius who followed Lars Porsena to avenge the wrongs of "the proud house of Tarquin" could never have cut the dash he doubtless did had it not been for those eight hundred slaves

That sickened in Ilva's mines.

And so with many a bright popinjay that has dazzled the eyes of Europe in mediæval and modern days. Many a gay crusader with his knightly following, many a lordly prince-bishop, many a splendid patron of the art and literature of the Renaissance rises before us on the picturesque field of history. We should not like to lose these figures; but we are bound to remember that they were only possible because, while they strutted on the stage, there were thousands of whom the world recks nothing, who dug the land and crawled in the mine and turned, in dumb patient ignorance, the ever-grinding wheels of labour's mill.

Such servitude and sacrifice may have been necessary to progress in the past; thanks to science it is so no longer. Human strength and skill have been multiplied a thousand-fold by the application of machinery and scientific knowledge to all the processes on which the feeding, clothing, and general comfort of mankind are dependent; so that it is, perhaps, no exaggeration to say that to-day the intelligent labour of *one* can do more for the maintenance and happiness of a hundred than in former generations the ill-directed toil of a *hundred* could do for one. There is no blinder stupidity than that which deprecates the substitution of brain-directed mechanical and scientific processes for manual labour in the production of what we call "the necessities of life"—things which, indeed, "perish in the using," but without the *use* of which man himself would perish, and the cheapness

and abundance of which lie at the root of all advancement. It is in the stupendous and growing accumulation of that result of surplus labour which constitutes wealth, that we see the potency—and we trust, too, the promise—of emancipation from that hard, continuous, soul-crushing toil that has hitherto been the lot of what we call the masses—an emancipation which is the first pre-requisite of all real progress—of a progress other than that which consists in the elevation and culture of the few through the degradation and damnation of the many.

(3.) There is a third point that suggests the possibility of a progress in the future more definite than anything that has hitherto marked the varying aspects of human affairs—that is, that now, for the first time in human history, education bids fair to become universal. Here or there people may express dissatisfaction, alike with the methods and the subject-matter of scholastic teaching; but it may be assumed that the advocates of blank, black ignorance are well-nigh extinct. That at least a moderate skill in the exercise of the intellectual faculties is as essential to human progress as is a reasonable leisure and a reasonable modicum of material comfort will probably be admitted even now. And we may hope that long before the twentieth century is in its decadence, people will have realised that the first duty of a community—and the most delightful of all its duties—is to be lavish of its wealth, its intelligence, and its love in the care and nurture of its little ones. Then may men and women look back with horror and amazement on the child labour and child slavery of the nineteenth century, just as we, the latest children of that boasted century, look back on the abominations of the Inquisition or the Slave Trade.

(4). There is one further consideration that I would venture to put forward. It seems as though modern

(2.) The mention of "the social and economic condition of the people" may serve as a link by which to pass on to our second pre-requisite of progress. Here, too, it is a *via media* that is to be sought—a way of reconciliation between the extremes of individualism and collectivism, egoism and altruism—in the practical conduct of human affairs. If society, as a whole, is to progress—if the millions of the people are to have share in that royal abundance that Science has won to us from Nature—it is essential that some means be found to thwart the brutal lust for purely personal gain, and to mitigate the frightful evils that have been nurtured under a *regime* of unprincipled and unchecked competition. At the same time most reasonable people will continue to believe that while human nature remains what it is—or anything like what it is—some incentive to skill, energy, and perseverance, other than that afforded by an exaggerated altruism, or by the whip of the communal taskmaster, will be necessary for the healthy development of man's highest powers.

And here, too, we are not without solid ground of hope. The steady growth of the altruistic spirit is perhaps the

some religion lays stress on a virtuous and useful life as "generally necessary to salvation;" and, of course, if all men were religious this world would be a much better place to live in than it is at present. But even this would not involve a permanent movement towards betterment, because it is of the essence of religion to be individualistic. Its work has to be done afresh for each soul, though, doubtless, in an improved society, all might start from a higher ground of vantage—just as now certain individuals "have a better chance," owing to favouring conditions, such as early training, pious example, &c. Still, religion (as hitherto expounded) has had no direct interest in secular progress; nay, it has been rather inclined to regard an enthusiasm for such progress with suspicion. If—as indicated above—a change has come over the churches in this respect during recent years, is it not simpler to attribute that change to scientific and economic influences pressing from without, rather than to the working of some evolutionary process from within? It is, of course, true of Christian principles (as of other principles) that they may be tending to results of which the individual, who makes them his rule of conduct, is utterly unconscious, and of which he might even strenuously disapprove.

most characteristic feature of all civilized communities to-day. Impelled by a sense of justice, by an imperative impulse to treat others as they would themselves be treated, we see men voluntarily stripping themselves of privileges and holding open the gates of demesnes that might have been for their exclusive enjoyment, to let the throng of their less fortunate fellows crush through. A peaceful revolution is being wrought out on all sides. Men keep their theories (for the present), but they are transforming their practice. More than half unconsciously, Parliament and the great municipalities are setting the pace for a mighty and beneficent evolution of society. By a splendid and fearless expenditure on those things that concern the true welfare of the community, they are enabling the Have-nots to share with the Haves the benefits of the accumulated and ever-accumulating wealth of the entire body-politic. In all probability we have only seen the commencement of this process; and it is in this direction that we look most hopefully for the solution of that old problem of the unequal distribution of mundane advantages—a problem that seems to have been laid, as a special burden, on this nineteenth century.

(8.) It is but one step further from the *solidarité* of classes to that of communities. And this brings us to our third pre-requisite of progress. Just as the nation can make but a poor and stumbling advance while its constituent elements are at war among themselves, so must humanity be handicapped in its progress while whole communities regard one another with jealousy and suspicion. It may be impossible to abolish war;* but if

* Mr. Pearson sees no prospect of a decline in militarism. He thinks that a state of preparation for war is "inevitable to all time." "Military absolutism will be combined with industrial socialism in the communities of the future." Yet he recognises war and preparation for war as among the chief causes in the decay of nations; therefore he is fast bound in pessimism.

it be, then we must abandon all hope of any real advancement for the race, for then must the mass of the people, in every country, be condemned in perpetuity to a living death of long-protracted and ill-requited physical toil. There can be no intellectual or moral advance except it rest on a basis of material easement and comparative leisure. But such easement and leisure are unattainable so long as the resources of nations are taxed to the uttermost in maintaining an ever-increasing class of non-productive citizens, and in providing for the appalling cost of modern armaments.

And yet, though the immediate prospect be gloomy enough, God knows, we need not despair of humanity. The beneficent influence of science has maintained, and is maintaining, peace among the nations, despite all the passions, the prejudices, the evil traditions and the manifold class interests that are consciously or unconsciously making for war. The international and catholic character of science itself; the rapid and cheap inter-communication that steam has rendered possible; the practical annihilation of time and space through the telegraph, rendering it difficult for the lie that goes forth to sow distrust and fear among credulous peoples, to get any great start of its winged contradiction or explanation;—it is these, and things like these, that are the true heralds of a world-encircling peace. Philanthropists are apt to begin at the wrong end. You may theorise about arbitration courts and interchange courtesies at Hague conferences; but ultimately it will be regenerate individuals that will produce regenerate communities; and it will be in the consensus and *solidarité* of such communities that the nations of “articulately speaking men” may yet learn to live together in peace and sympathetic amity.

Ladies and gentlemen, I have detained you too long. And were you to demand—with a justifiable impatience—what is the upshot of it all? I might be in some confusion for a reply. And yet not wholly so. When one speaks of the future, moderation is becoming; yet of this much I dare think we may rest assured. The golden age comes not through any mere “process of the suns.” There is no such thing as a moral or intellectual evolution apart from human aspiration, effort, sacrifice, and achievement. Things will not come right of themselves.* The living men of the race hold the future in their hands, as a ball of clay. In due time they will pass it on to those that are to follow them; but in the passing, it will have been shaped and moulded beneath the pressure of their clinging fingers. We too have our part to play, and the very existence of such a Society as ours is evidence of an aspiration towards betterment—towards a deeper culture

* Perhaps the conclusion allowed to us can be no better expressed than in the grave and sober words of Huxley, “I see no limit to the extent to which intelligence and will, guided by sound principles of investigation and organized in common effort, may modify the conditions of existence for a period longer than that now covered by history. And much may be done to change the nature of man himself. The intelligence which has converted the brother of the wolf into the faithful guardian of the flock ought to be able to do something towards curbing the instincts of savagery in civilized man.” Only, he adds, we must put aside the notion that “the escape from pain and sorrow is the proper object of life.”

With this compare Mr. Pearson’s sombre picture:—“It may be that there will be less enthusiasm in those days, because there will be less hope; but it may be assumed that there will be less misery, more resignation and, it may even be, more content. Life in itself is an inexhaustible delight to all but a few, and the conditions of life will be more tolerable, though the sky above may be more grey.”

He assures us that “there will actually be a change for the better;” but some of us may question where the betterment comes in when we read,—“What is assumed also is that the gradual decay of faith, the diminished importance of family life, and the loss of original power as genius is deprived of its noblest fields, will be serious offsets to the material development of life; and that even physical conditions will be worse as cities grow upon the world and as the field of adventure in unsettled regions is closed.” (*National Life and Character*, p. 27).

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So much for a sociology avowedly based on the data of physical science.

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POLITICAL Economy as a branch of science practically came into existence with the end of the eighteenth and the beginning of the nineteenth century. Adam Smith's great work, the *Wealth of Nations*, was indeed published in the year 1776, and there had been, prior to his time, many writers and thinkers upon cognate subjects, just as there were mighty men before Agamemnon ; but though it was felt even from the first, amongst those best qualified to judge, that Smith's book marked the opening of a new era in Economics, and laid the foundation as a science of a most important branch of human thought, it nevertheless did not receive the full attention which it deserved from the general public of his day. The *Wealth of Nations* was, however, translated during the next decade into the languages of the great commercial countries of Europe. France and Switzerland, in the persons of Say and Sismondi, furnished able and ready workers in the same field, and the earlier half of the century now drawing to a close amply rectified the anomaly to which I have referred. It came indeed to be felt among philosophic minds as if a new world of thought had been laid open, and the science, especially during the second quarter of the century, came to be regarded by many thinking people as providing, if not a remedy for all the troubles of the body politic, at any rate a method of approaching and dealing with them in a scientific and satisfactory manner. And there can be

no doubt, let me say, in passing, that much of the great and wonderful development which has characterized this century above all others was due very largely in its initiation to the doctrines of the new Political Economy. As an example merely, for I do not desire to test the endurance of my hearers with details on this point, we have simply to remember that we owe to it that system of Free Trade which, even in its partial adoption, has done more economically than anything else to develop the effective enjoyment of the results of human industry, and which, politically, has become the chief corner stone and bond of union of the greatest and freest empire the world has ever seen. And as an example on the reverse side, the century was still in its early youth when the greatest conqueror of modern times—Napoleon—who by the way is said to have detested the very name of Political Economy, laid an axe, by his adverse conception of a continental system in restraint of trade, to the root of the empire which he had reared by his military genius and success.

All this being so, it is upon the surface remarkable that a science which heralded the opening of the greatest industrial era of our race, and which has so largely contributed to encourage and stimulate that industry, should in the later part of the hundred years have become rather discredited in the popular imagination. The rising generation, it is to be feared, look upon its apostles and founders to a large extent as they would upon interesting remains of a pleistocene period, which serve rather to illustrate the history of the recent past than to direct the thought of the present day or anticipate the requirements of the future. Perhaps as illustrating this trend of thought even amongst the seniors and adepts of recent times, I may refer to a public pronouncement in this direction, made by our great

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The explanation of this comparative decline in the public interest in Economical Science is probably however not difficult to give. Whilst the inhabitants of the world have been gaining wealth by industry and commerce, they have also been becoming more exact in their ideas of things and theories. This is due in part to the habits engendered by the general cultivation of what are ordinarily termed physical sciences, to which so much attention has deservedly been devoted during this century; in which approximately exact relations are sought, discovered, and acted upon, between phenomena and things which are in themselves approximately exact in character and can be expressed with a high degree of accuracy. And this exactitude of thought, imbuing the minds of the students of these sciences, has transfused itself into the mental attitude of all contemporary thinkers. So that pure Mathematics, although still necessarily the most complete expression of exact relations, are no longer the only science postulating such expressions, as is indeed evident from the fact that, until the platform of mathematical expression is reached, no physical science can in these days claim to have attained any high degree of development.

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The explanation of this comparative decline in the public interest in Economical Science is probably however not difficult to give. Whilst the inhabitants of the world have been gaining wealth by industry and commerce, they have also been becoming more exact in their ideas of things and theories. This is due in part to the habits engendered by the general cultivation of what are ordinarily termed physical sciences, to which so much attention has deservedly been devoted during this century; in which approximately exact relations are sought, discovered, and acted upon, between phenomena and things which are in themselves approximately exact in character and can be expressed with a high degree of accuracy. And this exactitude of thought, imbuing the minds of the students of these sciences, has transfused itself into the mental attitude of all contemporary thinkers. So that pure Mathematics, although still necessarily the most complete expression of exact relations, are no longer the only science postulating such expressions, as is indeed evident from the fact that, until the platform of mathematical expression is reached, no physical science can in these days claim to have attained any high degree of development.

But Political Economy has made but little advance in this direction. Like other subjects to which we do not refer in this Society, it has dealt in the main with popular but inexact conceptions, and thus, like the fallen angel on

his way to Paradise, it has had to pass through a limbo of vague ideas,

A dark illimitable ocean without bound,
Without dimension, where length, breadth and height
And time and place are lost.

I do not of course wish to ignore the fact that Political Economy is still taught largely, and retains its nominal importance in the curriculum of our higher educational establishments, and that eminent men in our own day make it their chosen subject of thought and dissertation. But the clear tendency seems to me to be to give away and modify the original position of Political Economy by expanding rather than limiting its area, by enlarging the frontier rather than by surveying the country within it, and by merging it as a vassal state into the wider and still vaguer suzerainty or empire of Sociology. It is not that I dispute the value of the historical and positive point of view in Economics. But this should not be allowed to supersede analysis merely because analysis presents certain difficulties. As Whately well puts it, "We are more likely to advance in knowledge by treating of one subject at a time than by blending together several distinct inquiries," and the more diffuse methods in Economics are all open to this objection. I believe, myself, that the true future of the science lies in a resumption of the analytical method, and that the nearer you can get to mathematical formulæ for the expression of its laws, the more real progress will be made. Notable attempts to do this have in fact been made during the century by writers such as Cournot, Jevons, and more recently by Professor Marshall, but I think it will be evident that, however praiseworthy these efforts have been, they have only succeeded in expressing, under symbols pertaining to the Differential

and Integral Calculus, considerations which would be more intelligible to the great bulk of students if expressed in the ordinary terms of language.

I do not desire, let me say emphatically, to undervalue either the genius or the ability of these writers to whom I allude. I would rather pay to them the poor tribute of my genuine admiration of their efforts. But they have had, amongst other difficulties, to encounter the primary difficulty of all Political Economists, which arises from the inexactness of the ideas upon which the science is based, and I am not sure that they have encountered it with full success. This inexactness is notorious to every one who has read *Political Economy* at all, and I need hardly, therefore, stop to point out that it attaches to all its principal terms, such as wealth, value, labour, capital, exchange, etc., etc.

It is to be remembered, moreover, that by a certain unwritten understanding, all these terms, and, in fact, all the ordinary terms used in the science are to be employed by Economical writers in their popular and conventional sense, and the result, as might have been expected, has been to introduce the somewhat chaotic state of things to which at an earlier stage of this paper I have alluded.

For my present purpose, however, I do not ask the Society to follow the fallen archangel in his full and devious flight, but shall approach only the basis of Economics, which, from the time of Adam Smith himself, has been regarded primarily as a science dealing with the production and distribution of Wealth. Thus, for example, John Stuart Mill, to my mind by far the most important writer on the subject of Political Economy during the present century, states emphatically that the subject of the Science *is* Wealth, of the meaning of which he says every one has a notion sufficiently correct for common purposes;

in which common purposes he clearly by implication includes the subject of his treatise. But Wealth, even consecrated as a term by the leading economists, is obviously not at all definite in its meaning. It carries with it only a vague, although pleasant impression, and has not a clearly cut definition. All sorts of dialectics may, and indeed, have arisen as to whether wealth consists of commodities only, or in part of potentialities, or of personal attributes such as those derived, for example, from an education which fits its possessor to fight to advantage the battle of life. And even having regard only to the more material aspect of things an ambiguity remains. For Wealth to most minds probably, and it is to be remembered here again that in Economics we are always hampered by the necessity of adhering as far as possible to the popular use of terms, Wealth is to most minds probably represented by what we call money, and at any rate in the more highly developed communities the money value of possessions would be considered as the measure of the Wealth of the possessors. But as against this we have to set another conception of Wealth sometimes held separately, and at other times very generally interwoven with the last one, and that is the capacity of possessions to satisfy directly the requirements and desires of the possessors, and this from the natural course of human development in its earlier stages must have been the original, as it is still the most philosophical form of the idea. But whilst it is philosophical, and would be absolutely accurate for a solitary being who lived a Crusoe-like existence, it fails entirely if we are considering the economic condition of mankind as an existing whole.

We thus arrive at the position that the idea of Wealth from the general standpoint of humanity is compounded of two factors ; (1) the aggregate exchangeable value ; and (2)

the aggregate capacity of yielding satisfaction to the possessors of its component parts. Where the conditions of trade and barter are most effective, the former factor is the more important and becomes more or less predominant according to the freedom of the markets and the facility for sale and exchange of the subjects of Wealth. Where the state of life is furthest removed from trading activity, the second factor is the more important, and varies with the prevailing taste of each locality and period of time.

When, however, you come to deal with the production and distribution of a something formed by the coalescence of at least two variable factors, varying relatively to each other, and also intrinsically in themselves; and when, moreover, a law of continuity of either series of variations is difficult to assign, it is evident that that something is an extremely slippery and shady basis from which to work out general conclusions applicable to the community at large.

The inherent difficulty thus arising has been clearly apprehended by many writers, of whom I would mention for the purpose of this paper, Professor Jevons, whose untimely death cut off a brilliant and promising career, and who preferred to approach Political Economy from the point of view of Utility rather than of Wealth, and who has been in substance, though not in phraseology, followed of late years by the so-called Austrian school of Economists, of whom Mr. William Smart may be regarded as the representative in this country. Jevons differs from these later writers in banishing the term Value as a deceitful and unreliable phrase, but he of course does not get rid or really desire to get rid of the ideas lying behind it; he almost entirely rids himself also of the term Wealth, which, under his system, would consist merely of Utility or utilities in the larger sense of the term. Although he despairs the use of the word Value, whilst the Austrian

school retain and make much of it, the fact is to my mind that they are really essentially at one with him, and that the apparent difference between him and them is a mere question of phrasing. Of the Austrian school it may at any rate fairly be said that they approach Economics from the side of Value rather than of Wealth, and paradoxical though it may seem in the face of Jevons' disclaimer, I think that he practically did the same thing under a different name.

I believe that this departure is entirely in the right direction, but whilst paying all honour to these writers, I do not think they have relieved themselves by this change, as fully as they might have done, of one of the ambiguities which beset Economics. For it is evident that Wealth is, and must be, a mere multiple of Value, it being the fact that the items of which Wealth consists are valuable which makes them constitute Wealth. The ambiguity of the multiple pursues, naturally enough, the sub-multiple or factor, Value, and just, therefore, as Wealth may be regarded either as intrinsic, or as consisting of the capacity to satisfy its possessor, so also may Value as its factor be regarded either as intrinsic or as assessable by the extent to which a commodity or thing satisfies human requirements. And accordingly the school to which I have alluded (I must not be understood to include Jevons in the remark) recognise two sorts or forms of value—objective value and subjective value—answering to the terms used by the older Economists, commencing with Adam Smith himself, of "Value in exchange," and "Value in use."

I have no doubt myself, however, that this ambiguity in the term Value can be got rid of by carrying the analysis a stage further, and that it can be shown that these separate ideas above referred to really merge into

one, and moreover, that an immense amplification has to be made in the field covered by Utility and intrinsic or Objective Value.

The idea of Objective Value or Value in Exchange, coming back as it does to the expression of Value in money as the most convenient ordinary vehicle of the conception, can, in reality, be reduced to the same category as the other or second idea of Value, when this last is properly amplified, as I now proceed to show.

Starting to prove this, as is most convenient, from the popular money conception for reasons already indicated, we find in the first instance that money, except as regards its own subjective value, in relation to which it belongs already to the second category, is merely representative of other things, those things being the things for which it may be itself exchanged, that is to say, for all other things or some of them. There is no mystery about money in this regard, although many treatises have dealt with the subject, and I wish to state in passing the true general law which always governs it. A very great number of easily-handled commodities, amongst which are cattle, gold, silver, copper, iron, tobacco, fish, salt, shells, brick tea and others, have been used as money in different ages and different countries, and some of them will probably be so used to the end of human time, the chief modifying tendency of modern society being to use instruments of credit, which is in itself a measurable thing, as the most convenient sort of money at any rate for interchange upon the larger scale. The real law of what constitutes money is easily deducible from even these few data, and should be described accordingly in my judgment as the law of *Mutual Convenience*, and expressed in some such words as these:—*Money is always the commodity or thing which is mutually most convenient as the means of satisfying an*

exchange between the person who pays and the person who receives in any transaction.

Bearing this in mind, we see that we are at once able to eliminate from the Objective category, with which we are for the moment dealing, the idea of "money," and to substitute for it the phrase "other commodities or things." And thus Objective Value, or Value in Exchange, simply means, therefore, the capacity of one thing to become the equivalent, to those who make exchanges, of some other thing or things. But this capacity or power cannot be objectively intrinsic in the things themselves, and must, therefore, rest upon a process of estimation outside of themselves. Such an estimation might conceivably be made by any sentient being, and very possibly is made to the limited extent of their range of faculties and knowledge by all sentient beings, but in human affairs, with which alone of course we are competent to deal, this estimation must be a human estimation, or, in other words, a subjective estimation or Subjective Value, and in presence of this fact, Objective Value thus becomes reduced and merged into the second category which is that of Subjective Value in general.

And now let us deal with this second and inclusive category itself of Subjective Value, or, as the older economists term it, Value in Use. Professor Jevons, as we have seen, abandons the use of the term altogether, substituting for it the phrase Ratio of Exchange, which may be taken as answering primarily to Objective Value, but he really retains the idea of Subjective Value under the term of Utility taken in the broad and philosophic sense of that word, meaning the capacity of things to satisfy human requirements and desires. He is substantially followed in this by the Austrian school, who however retain, as I pointed out before, the word Value: Jevons'

Utility really corresponding with their Subjective Value, which they base upon Utility in his sense of the phrase. It might, perhaps, be possible by stretching this term of Utility very much to make this use of it agree with a largely preponderating number of the facts, but it is to my mind necessarily analytically inadequate, for a reason which I must now venture to point out. If Subjective Value is fixed by Utility, it is evident that a new thing such as had not been known to exist before could have no Subjective Value in its origin, for its subjective utility could not have existed at all. But the facts of experience contradict this. Whether the thing be a new commodity in the more material sense, or whether it belongs to a less material order, as a power potentiality or facility, it does certainly, even at its first coming into existence, possess a Subjective Value; and the bare fact of a supply of it being possible creates, in many cases if not in all, a demand for it which is not measured in the first instance by a Utility, which by the hypothesis is still quite unknown. The Subjective Value at first must indeed have essentially the cost of production as its only provisional measure.

It is somewhat singular that economists, even those who do not base their systems upon Utility, have never recognized the simple thesis which lies under this circumstance, that is to say that, analytically, the original supply of an entirely new thing always precedes the demand for it.* It is true that supply and demand afterwards walk largely hand in hand together, acting and reacting upon each other, but in the origin it is not so. They are not even like twins, between whom a necessary priority must

* Lord Charles Beresford, however, in an address, delivered 24th November, 1899, remarked that, "Supply creates demand despite the seeming paradox;" which is quite in accordance, fundamentally, with the view above expressed.

exist, but they may rather be said to stand to each other in the relation of cause and effect. It is not until a thing becomes known and discovered to mankind that any demand for it exists at all. This seems to be so obvious, perhaps, as to be nearly of the nature of a truism, but my excuse for stating it so emphatically is that it has not been to my knowledge hitherto recognized by economists, that it renders the utilitarian theory of Subjective Value insufficient, analytically, to account for some of the facts, and that it is largely interdependent with a vitally important economic law with which I shall deal presently. For the moment I point out that it is evident that this fact strikes at the root of the analytical completeness of the utilitarian view of Value, though I do not indeed question that Utility has still a large place in Economics, as will be pointed out in detail further on. But at present I must insist upon the point that you have only got to discover a new thing and the mere fact of its existence in many cases, if not in all, creates a demand for it, and human nature in the aggregate of course, straightway adds on to itself a new requirement, although it would obviously be straining language to say that the value of the new thing consists in its capacity to satisfy anything in the first instance except possibly a love of novelty. Were there indeed no better way of accounting for the whole case of Subjective Value, it might be necessary to incur the strain of attributing it entirely to a far fetched idea of Utility, but that there is a better way, and one which goes entirely to the root of the matter, I will now endeavour to show.

One of the profoundest of natural laws, affecting probably all creation, and certainly all human beings, is that of Imitation. It may be described as *a directive tendency which exists in all natural units to imitate or follow the*

action and behaviour of other units in proportion to their natural propinquity, using the term propinquity in all its senses: a directive tendency which is absolute except in so far as it is deflected by other forces, and which, in conjunction with natural selection and the survival of the fittest, accounts for the whole differentiation of life as known to us. As we know it in human consciousness we see on the surface and at first sight that almost the whole of man's intellectual being is built up by it through the processes of education, natural observation, and continuous doing and thinking as other human beings do and think, or as they have done and thought before us. If you take out of the intellectual constitution of a human being the results of Imitation in its various forms, you have practically nothing left. Imitation, from this point of view, may be regarded as the subjective aspect of a universal directive agency, such as that, perhaps, of which gravitation is an objective function. It may be regarded as comprehending within itself all those phenomena which we class under the heads of heredity and instinct, and is well illustrated even in the unconscious so-called instincts of plants and animals, including human beings, which attend them from the moment they come into separate existence, and which are continuous in kind with those instincts of the development of which we, as human beings, are more conscious; and which rise by a continuous and unbroken series up to those habits or results of self-imitation of which we are absolutely conscious; and come finally to that purposive imitation which is a still more distinctively intellectual process. I am not now reading a monograph upon Imitation. In its many manifestations there is no breach of continuity in the various series of its all pervading action, and we are, therefore, bound to assign over to the same

generating function the results of this subtle and all pervading law, which at one extremity of things shows itself, perhaps, in the vibrations of the ether, which displays itself in molecular forces of all kinds, and which stretches through the whole of inorganic and organic existence to the highest ranges of human thought. Many pages would be required to deal at all fully with even a portion of this subject, but that is not necessary to-night. It is sufficient to say for our present purpose that it is no doubt in human experience that the law may be best verified by us, as human beings, and in this it becomes the subjective aspect of a universal world force. The efficient origin of the law, as of all other force, lies necessarily beyond our scope and intelligence. But just as we shall see that it influences Economics, so also does it pervade the whole of the human atmosphere. Whether it be in language, politics, law, the fine arts, religion, morphological and ceremonial, or in habit which finds its confirmation and rests its throne upon self-imitation, or in any or all of our intellectual phases, Imitation is always there in the final analysis as the great directrix of human life and conduct.

The bearing of these considerations upon the question of the origin of Subjective Value is obvious. Although the intrinsic qualities of things in themselves, when once ascertained as answering to certain primary requirements of human nature, will always seem to give certain things a prior claim to inclusion in the category of Subjective Value, it is really the larger and inclusive law of Imitation which brings every known thing into its purview. Every new thing creates what may be termed a new and added want or requirement of humanity taken as a whole, and it is afterwards that Utility comes in in the large sense of the term, and regulates ultimately subject to secular

changes, the relative and respective value of the new thing to all other things.

All this sounds perhaps a little abstruse, far more so than it really is, and I think I am bound to supply at this stage something of the nature of a concrete illustration. The only difficulty in doing so lies in the *embarras de richesses* which lies around us, but to throw some light upon a rather novel proposition, I trust it will not have something of the effect of an anticlimax upon you if I take in this connection the very familiar instance which is to be found in the use of the well known commodity, Tobacco. As a matter of fact, so far as I can ascertain, the herb tobacco was not known in the old world until the discovery of America. It was first observed in use by Columbus and his followers, as may be gathered from certain records, but it was not introduced into Europe until the time of Elizabeth—Sir Walter Raleigh being one of those who, by his example, brought about, or rather accelerated, the operation of the law of Imitation with regard to this humble matter. There can be little doubt that both Sir Walter Raleigh and his imitators must have suffered a certain amount of personal discomfort in the beginning of the practice of using tobacco, the laws of physiology being clearly the same in the 16th century as they are at present. But in spite of this circumstance, one not confined to these comparative innovators, but perpetuating itself in the person of most neophytes to the present day, the use of tobacco, whilst in its origin for each individual clearly imitative, has become one of the most widely extended of human phenomena. It is quite true that in a very small number of cases the habit of using the herb may be the consequent of medical advice, but it is at least equally true that, in the vast majority of cases,

a man smokes in the first instance for no other reason than that he sees other men doing the same thing, and that what is originally merely an imitation of someone else, acquires the additional force of self imitation, which we term habit, and becomes an inveterate practice from which few endeavour to release, and fewer still succeed in releasing themselves. It is a forcible illustration of the process that we may sometimes see the early genesis of its adoption repeated on the same imitative lines by urchins in the street and young boys attending school : and the imitativeness of the habit is illustrated, indirectly, in the negative fact that female children rarely go through the ordeal, just because their natural propinquity, which I use in the large sense of the term, is to the women of the community, who do not often use tobacco; the determinant as between the adults of the two sexes obviously being that its use is hostile rather than friendly to the domestic cleanliness, in the assertion of which the 'fair sex' have always had the main charge and authority.

The history of the consumption of tea in Europe furnishes an illustration of a similar kind. The use of tea in the Old World, including, of course, China and Japan, was a matter of great antiquity. And it is a singular illustration of what we otherwise know from history of the jealous policy of isolation pursued by these two last-named countries that nothing was known of tea in Europe till about the middle of the 17th century. This fact is, I believe, generally admitted, but I happen to have a singular confirmation of it in an old book which I have brought with me here to-night. It has the important title, *Ars recta ad vitam longam*, the right way to a long life, and was published for Dr. Venner, of Bath, in the year 1650. Now one express object of this book is to give advice upon

the subject of diet and other matters, and most minutely does the worthy doctor deal with all sorts of food and beverages. He discusses learnedly the question whether we should eat two meals or only one meal per day. He has strong views upon the suitability of the different sorts of sack to different temperaments. But from first to last he never even mentions tea, and it is, I think, quite clear that, if an eminent physician, residing in Bath, of all places in England, writing an exhaustive treatise upon diet, says nothing about tea, it is because he had never heard of tea, and, consequently, that tea was unknown even in those superior social circles of which he himself was an ornament, and in which he was an adviser. As a matter of positive history I find that Pepys in his diary gives us the first notable reference to the use of tea in England, under date of 25th September, 1660, in the words: "I did send for a cup of tee, a China drink, of which I never had drunk before."

But once introduced, the imitative tendency has carried the consumption and use of tea to every household, until, like tobacco, it has long endeared itself to the heart of every English Chancellor of the Exchequer. And in its use it is to be noted that there is no differentiation as regards sex, unless, indeed, it be that owing to the method of its preparation, which requires a certain amount of domestic convenience and manipulation—(unlike tobacco, the use of which militates somewhat against indoor cleanliness, and lends itself best to outdoor treatment)—the consumption of tea is on an average greater with the fair sex than with the ruder and masculine.

It is not necessary to multiply illustrations further, although they can be drawn from every department of human conduct. Just as an African chief is said to revel

in the glories of a tall silk hat, and desires to have blue beads, red blankets, and highly colored Manchester prints as soon as they come to his view, so is a corresponding process true of all human beings in every degree of development. The mere fact of others possessing a thing which the human unit has not got, begets in him or her a desire, more or less keen, according to temperament and proximity to it, for its acquisition, and thus it comes about that the element of Subjective Value on the part of humanity as a whole, which is the true basis of Economics, at once attaches itself to everything that can be produced, even though in the most philosophical and extended meaning of the term the Utility may in the individual case be practically non-existent.

It follows then, from these considerations, that Value, which is and must remain fundamentally a subjective conception, is the one primary element upon which the Economist should build up his science, and in their views upon this point Jevons and the Austrian school are practically in the right, although Jevons, as we have seen, discards the word. I do not propose myself to attempt to act as architect of the economic temple of the future, but shall conclude my paper with certain considerations arising from the thesis, some of which may possess some elements of novelty.

All Value being, as we have seen, subjective or related to the individual or race of individuals, it follows of course that it is simply relative in itself. Individuals and communities fortunately differ, and differ more or less at different times in their estimation of this respective relativity, and it is this circumstance that acts as a constant ruling force in trade and exchange. It is here, also,

that the elements of time and geographical situation enter as variables. But, taking humanity as a whole, during a given space of time, and assuming normal conditions and unrestricted exchange as postulates, it follows that the value of every commodity or thing can, theoretically, be expressed in terms of any other commodity or thing. To reduce this to a universal method in practice would, however, be enormously difficult, because it would be necessary to arrive at the relations between each thing, and all other things, so as to make the expressed value of a thing an integration of the relative value of all others, a task which would obviously be beyond the compass of human intellect and human time. But still, in theory, a true mathematical money or measure of value would be an inverse relation of the money vehicle to such an integration, and therefore a true mathematical money is practically unrealizable in substance. It does not, however, by any means follow that the conception is unnecessary for the purpose of accurate reasoning. It is in fact essential for our purpose, just as in Euclid's demonstrations it is necessary to postulate things which are equally unrealizable in substance, as for example—lines with only one dimension, that of length, and points without any dimension whatever. The only approximation to this true money which can be reached in actual material is to take some one commodity, or thing, to which all other things may be provisionally referred. And here the law of Mutual Convenience comes in and prescribes what that shall be for each human combination. If you wish, therefore, to establish a "world-money" it is simply a question for the whole of mankind to decide and regulate; but such a process is clearly impossible until the communities of the world become completely interdependent and welded into one economic whole. And even supposing this

universal concurrence to be obtained, it would still have to be borne in mind that whether the "world-money" was constructed of gold, silver, or anything else, its own individual Value would be variable just as is that of any other thing, though, perhaps, not to the same extent as some of them. In the present economic state of the world it is clear that an immense prescriptive advantage is possessed, apart from other considerations, by the commodity which has the largest measure of freedom from tax and impost; and that commodity is, as we know, in the more highly civilized communities, undoubtedly gold.

The time element in Value is of great importance. I need hardly say that in general considerations, such as we are dealing with, we have little or nothing to do with the day-to-day and week-to-week higgling of markets taken over very short periods. The smallest unit of time that can be satisfactorily dealt with is the natural cycle of time appropriate to either the production or the periodic consumption of each commodity. Commodities again may be regarded as either simple or complex, and I shall not ask you to-night to consider the case of the more complex commodities, but only that of the more simple—such, for example, as the products of agriculture. In the case of most of these agricultural products, and in most countries, the time unit may be taken as coinciding with the natural year. In the case of metals and minerals generally, and many other commodities, both simple and complex, of the former of which the metals may be taken as the types, the natural year does not sufficiently apply except by considering the consumption or wear and tear during the year, for the production here is not governed by times and seasons in the same way as in the case of agricultural products, but varies from time to time according to con-

ditions of discovery and exploitation, the continuity of which is liable to large deviations. The larger the area of time, so long as that period is in excess of the natural unit of each, the more regular and definite will be the average ratio of Value of any one simple commodity to any other, so that in the last resort, by continually increasing the area of time, we proceed by unbroken steps to the final statement, which is obviously correct on general grounds, that, taking the whole existence of our race as a completed account, the ratio of Subjective Value of any one thing to any other thing taken over the whole time will be in a fixed and definite proportion. Taken over any averaged shorter time, so long always as that shorter time is not shorter than the natural unit, the average oscillation of relative Value for those shorter periods will be greater in proportion to the shortness of the time, this being a consequence of the law of Imitation operating in Economics, inasmuch as the demand during that time for each thing respectively would virtually be the same as for any other given time of equal duration, whilst the supply of each would vary respectively according to the physical data of the respective production of the commodities or things.

In these considerations the natural time unit of production, or the equivalent consumption, where the former cannot be predicated, is taken as the minimum unit. Fluctuations during a less period than the time unit, and already casually referred to as excluded from our main survey, are often classed under the well-known phrase of "the higgling of the market." There can be no accurate formula for these short-period changes as they are largely due to news received on one day and contradicted on the next, and to other data which it is impossible to classify, but, so far as these discontinuous variants can be excluded, fluctuations due to this "higgling" may be conveniently

considered as approximating to the convergents of a continued fraction, the mean value of which is the natural time-unit ratio, or value, during the constituted period.

In the preceding observations, as well as those which follow, it must be understood, of course, that normal conditions of trading and intercourse are assumed. War and artificial restraints upon trade, I need hardly say, introduce discontinuous considerations with no possible or imaginable law of variation, and all that we have said in this matter, and in that which is to follow, is submitted entirely subject to this present qualification.

It will be useful in proceeding to the next consideration to take, in the first place, an illustration of a concrete kind. If there were only one human being the relative value of all commodities or things available to him would be in a fixed ratio upon a given basis of time and experience. But if there were two men living in proximity to each other, and otherwise isolated—let us assume that the one is a fisherman who catches fish for his subsistence, and that the other is a grower or procurer of fruits—and to simplify the theorem let us imagine that these two produce, or obtain, only these articles I have named. It is evident that each of them would consume for his own use so much of his produce as his physical desires dictated. But what could they do with any residues? They could only consume their own desired quantities, whilst a natural decay, deterioration, and ultimate destruction would attend that which remained; and by the law of Imitation each would desire a portion of that which the other possessed. Obviously, then, supposing there was no barrier between the men created by fear or emotion of some kind, the fisherman would exchange a

part of his fish with the husbandman for a part of his fruit. And inasmuch as we have postulated two commodities only, the whole superfluity, or to speak more accurately, so much of the fish as the one could spare would be exchanged for so much of the fruit as the other could simultaneously spare. That is to say, the total overplus beyond the requirements of the constituted necessity would tend to be exchanged equally. For it would be useless to hoard any portion of either the fish or the fruit, as from their nature they would become useless, except in so far as they could be promptly consumed.

The tendency over an area of time would, of course, be for the two producers to produce just sufficient of the two commodities to satisfy their joint requirements, and to exchange on the lines already indicated. But if we now extend the supposition to three producers, and three commodities of a perishable character, a further phenomenon comes into play. There is a competition between the commodities, and a market in embryo is created. For whilst the law of Imitation still induces each person to desire to acquire a portion of the things possessed by the other persons, it is evident that, whilst all each can offer is that which he can spare from his own production, he may prefer, as compared with the other members of the trio, a larger or a smaller quantity of each of the other two things. His preference would, however, almost certainly at times clash with a similar preference on the part of another member of the trio, and thus, in the effort to obtain a larger quantity of the thing most desired, an appreciation of relative Value would be set up in favour of the thing most largely desired by the three collectively. It is at this stage that Utility, in the sense of capacity to satisfy human requirements, becomes a dominant factor. Obviously, as you enlarge the number of producers, and

the number of commodities or things, the factor of Utility becomes more and more dominant, until it actually comes to express the general relation of known things to each other so far as their general Value is concerned.

The fundamental idea of the whole of the disposable surplus of one thing being given in exchange for the whole disposable surplus of another thing, which would certainly exist in our hypothetical case of the two individuals, is never wholly obliterated, and remains as the key to the exchange of all simple commodities. Through there being a great number of these which for our present purpose we regard as simple commodities, which are obtained in varying proportions of quantity, it becomes impossible to trace the relation in its details, but this much of it always remains true, that taken over not less than the natural period of production, which is one year in the case of agricultural products, a longer period in the case of minerals, and in the case of human labour a still longer period, the purchasing power of the total quantity of the simple commodity produced is, if it could be stated in the terms of a mathematically exact money measure, practically equal for each such thing for equal times, and that thus price, expressed in similar terms of course, is simply an inverse relation of the quantity of the thing produced during that natural period of production: the disturbing influences of war and artificial restraints being here, as already stipulated, again eliminated.

An actual verification of the working of this law in practice it is not within the sphere of my paper to-night to attempt. But one expression of it, and that, perhaps, the most general of all, is to be found in the obvious fact that the whole sum total of human exertion, which of course includes labor and all other human activities, is always exchanged, considered over an adequate time area, for the

whole aggregate production of Subjective Value during the equivalent time. This may seem to some like an assertion in other terms of Mr. Henry George's theory that wages are not drawn from capital but produced by the labour; but upon an easy analysis of the terms used it will be found that the apparent resemblance in the two propositions is not a real one; partly because that which Mr. Henry George terms labour is a narrower sense of and simply an item in the larger expression of "human exertion"; and partly because Mr. Henry George disregards the time element which would vitiate a theory such as his, even if based on the more general expression, which itself becomes more and more approximately true only as a larger and larger area of time is taken.

The mathematical expression of this law is obvious. If the relation of price and quantity taken over suitable periods of time is thus an approximately exact inverse relation, then to the extent that it can be taken to be exact it follows that the product of which they are the two factors is constant. This is, we know, the relation of the *locus* of a branch of the hyperbola, expressed by its co-ordinates when the hyperbola is referred to its asymptotes. That is to say, if the quantity be measured by the abscissæ, and the mathematical price by the ordinates, the rectangle formed by the two factors is constant for all abscissæ, that is for all quantities produced in equal but different natural time units. All commodities or things of positive value might thus, theoretically, be represented for the purpose of comparison with each other graphically, allowing in each case for the varying supply of each commodity for its appropriate time unit, by hyperbolic *loci*, the number of which is as we know infinite mathematically, and practically infinite economically, for the same axes of reference. These axes of reference themselves represent from the

nature of the cases human requirements in the abstract, or what may be termed the integrated economic man, and are, as they ought of course to be under this analogy, capable of indefinite extension.

It may seem to many minds rather lowering to regard humanity even in one of its aspects as an inverse function of hyperboloidal curves, but those to whom the proposition is revolting must remember that it is an inferred relation only primarily connected with economics, and which they do not need if disagreeable to them to carry further. To those for whom the idea has no distaste it will be interesting to remember that at least one established human psychometrical law, that of Fechner, is distinctly hyperbolic in its character, and that the relations of the suggested curvature are infinite in their number and diversity.

It is an obvious corollary to the above stated theorem that cost of production and discommodity in all its forms can thus be consistently and conveniently represented, either by corresponding ordinates and abscissæ of the conjugate hyperbola, or by minus measurements on the other branch of the primary hyperbola itself.

One further qualification to the preceding reasoning remains to be made. We have, as you know, considered the case of simple commodities only. This in itself is only a provisional assumption, for of no commodity can it be said that it is in itself so simple as not to include many minor variations of quality, or so simple in its production as to exclude certain complex conditions arising out of labor and other things. We have had to postulate simple commodities exactly as in Euclid we postulate points and straight lines, and as we have postulated also a true mathematical money, whilst realizing that all these data are theoretic only. But the influence of these

considerations upon the views stated, simply renders necessary, as already verbally suggested upon a side issue, the modification of the Economic hyperbola into a hyperboloid, which, by its additional dimension in space can give facility to such qualifications as may be required for further approximation to accuracy.

**NOTE UPON
THE LAW OF IMITATION IN PSYCHOLOGY.**

HAVING regard to the statements made above by myself as to the far reaching character of the Law of Imitation, it is probably desirable that some evidence other than that already given should be brought forward to prove its suggested universality. This is a work so extensive, however, that it can be only fully accomplished in much detail, but, as I stated in the course of my paper that it was in human experience that the law could be most easily verified by us as human beings, it is proposed in this supplement to consider how far the existence of the suggested law can be actually demonstrated by a review of some phases of its human aspects. On some future occasion I hope to address myself to the operation of the law in the other directions indicated in the foregoing paper.

In the first place, then, let us deal with the matter from the purely subjective and psychological point of view. In doing so I do not postulate any elaborate theory of the human mind or of consciousness. It appears to me that the considerations about to be brought forward are consistent with any metaphysical theory: but in order to clear the way I would define my own personal attitude in this

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regard as being that of the school of Natural Realism, the views of which have been clearly exhibited by Reid and Hamilton, and which appear to me to be the only serviceable and practical form of metaphysical theory. I assume, therefore, in accordance with the doctrines of this school that things are such as they seem to be to the observing subject, and that, *mutatis mutandis*, their qualities are correspondent, at least in respect of simultaneous and dependent variation and probably in their actual nature also, to the mental conceptions which represent them in the mind of the knowing subject or person.

Under this aspect, then, mind and its processes become resolved into a certain few primary conceptions, and we are enabled to disregard the verbal subtleties which sometimes trammel systems of metaphysics. Of these primary conceptions it will be found in practice that two are especially predominant in human psychology, these being Perception on the one hand, and Memory on the other. I do not deny of course that there are or may be other primary mental manifestations, but it is sufficient for our present purpose to consider the mind of humanity in the first instance from these two points of view in order to illustrate the views propounded with regard to the Law of Imitation as affecting the mental aspect of human beings.

I take, then, the case of Perception first. It may be assumed clearly that all Perception in the sense of natural observation comes to us through the channel of the senses, and that we can only observe in so far as we see, hear, feel, smell, or taste. It is not necessary to our proof, however, to show that this is absolutely so without any exception, for every one would admit that in any case it is through these channels that the great bulk of observations reach humanity.

Everyone will probably admit also that the most important of these avenues of sense is that of sight. By means of sight most minute and complete details are conveyed to our apprehension, and it is through the medium of sight that we are most conscious of a world external to ourselves. How then are the impressions of sight produced? They are produced, as we know from the construction of the human eye, in the same way as an image is thrown on a screen by a camera or magic lantern. And thus there is an actual picture or Imitation of the objects which are seen upon the retina. It is of this picture that our mind is conscious, and thus every process of sight is based upon an Imitation or copy of the external objects seen manifested upon the retina. Nor, indeed, do we stop here. If we attempt to describe in terms those things which we see, we at once find that we do so in language which proves a comparison between the object now seen and some other object or objects which we remember to have seen before. This implies in addition to the present image created by observation a recollected image resulting from previous observation, although we may be unconscious of any effort in the recollection, and this the more when it is the generalised resultant of a great number of previous impressions. So that we come to this, that all observation by vision or sight implies in each act an Imitation of the objects observed, and in most cases an imitative recollection of objects observed previously.

The case with regard to the sense of hearing is not quite so clear. We know, however, that sound consists of vibrations of the medium through which the sound is conveyed. These make themselves manifest to the organism as sound, and though it may seem to be rather straining language to say that we hear vibrations, it is

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nevertheless certain that the subjective thing, "sound," and the objective things, "vibrations," vary simultaneously, and are absolutely interdependent; it is evident, therefore, that in the case of sound, as in that of sight, it is the effect of the physical facts as impressed upon the sensorium that is reflected in consciousness. Whether this effect is the same in kind as the vibrations themselves is not material, inasmuch as the mental state produced is undoubtedly a subjective presentation of the sound vibrations. A record remains of them, moreover, which is made use of whenever the human being desires to reproduce sounds, as is instanced familiarly in the cases of language and music, which are both purely imitative uses of sounds previously heard. And it is clear that, if the reproduction is imitative, so must the original impression which is reproduced have been imitative also. For in speaking, the human being always repeats, under either new or old combinations, some of the sounds he has already heard: and in producing music, which is a sort of language, he also repeats sounds which he has heard either in their original shape or recombined as nearly as his imitative powers will permit.

I do not propose to deal in detail with knowledge derived through the other senses of taste, smell, and touch. It is not unlikely that these three are really in some sort one, since taste and smell are both a sort of touch; in the former case of a direct character, and in the latter directly due to the emanation of subtle exhalations, whose impact upon the sensorium conveys the sensation of smell. Of all of these, however, it may be said that the impressions which they convey are imitative of their objects in the sense in which we know those objects at all, that is to say, they are subjective presentations of the material data furnished by the objects, and are therefore imitative of

some of their properties. So that, to sum up, each sense has its special sphere of imitative presentation and the aggregate of what we know by sense perception of anything external to ourselves is the collective result of all the total presentations derived through the different sensory channels.

We know all things, then, primarily by imitative perceptions. And it is true of all of these that they are remembered with a strength proportional to the degree of attention which we have bestowed upon them. The sense impressions are stored away in an impalpable storehouse, the position of which we cannot define, and are there for use as may be required. There is no more wonderful fact in the mental constitution of man than that there should be this enormous capacity of retaining past impressions of all kinds lying quite dormant and unobserved until summoned by an effort of recollection. There can be little doubt that the memory is the real *continuum* in which the identity of the *Ego* consists. But for our present purpose, all we have to note is that the representations in the Memory are always purely imitative of the original impressions. In cases where the use of a recollection is very frequent, we become unconscious of any effort in recalling the individual impression, but where it is less frequent, the effort is of all degrees of arduousness in an inverse ratio to the frequency of the effort.

I do not know that it is necessary to give any illustration of the purely imitative character of memory, but it may perhaps be not impertinent to do so. Take the case, for example, of a poem which you have learned by heart, as the saying goes, and which you afterwards repeat from memory: what are the psychological processes involved? In the first place you have read or heard the poem, and the exact impress or Imitation of that poem has become

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stamped upon your memory. When you repeat the poem afterwards you are giving voice to an exact Imitation of those words as recorded in your mind; and this is so completely true that if you have learned the poem by hearing instead of reading, you would most probably repeat it with something of an imitative effect as regards manner and emphasis, in addition to the verbal imitation which consists in the use of the words themselves.

Take the further illustration of the memory of persons or places. The record in your mind is a more or less complete image of the salient appearances which have drawn your chief attention, and is, in fact, an Imitation of them. When you recall the place or the person the imitative picture returns, and it is these very original salient appearances which come out most strongly in the review. But it is, I think, unnecessary to labour the point further, as the purely imitative character of memory is a fact within the experience of everyone.

We have thus seen that human beings observe by means of Imitation, and that they remember by means of Imitation. I now propose to deal with another psychological process of a slightly more complex character—that of reasoning.

All reasoning depends upon comparison, and the true canon of the affirmative logical process is, in my opinion, reducible to the following expression :—

That which is true of a thing is probably true of its like; the degree of probability depending upon the extent and thoroughness of the resemblance.

But whether you agree to this canon or not, everyone will admit that without comparison there can be no reasoning. Comparison then, as the term implies, means the comparing one thing, fact, or judgment, with one or more other things, facts, or judgments. Now the mental

presentation of each such thing, fact, or judgment, can only be obtained either by direct Observation or by recollection through the Memory. But we have seen that all Observation is a result of an imitative process, and that the Memory is only a record of an imitative process. So that the whole of the data upon which the process of reasoning by comparison is based are imitative, and consequently the law of Imitation is its psychological foundation.

There is one other psychical form with which I will proceed to deal—that of Imagination. The term is sometimes used in a restricted sense as applying to efforts of recollection which call up to the mind scenes and so forth which we have actually witnessed, but in this sense it is a simple imitative presentation of the memory such as has already been dealt with. But the term Imagination is also used as representing the mental process by which we place before our minds something new in point of combination, the details of which are all, however, the result of past perceptions which we have made. Thus the work of the most imaginative writer of fiction or artist is simply a recomposing of ideas already derived from observation and preserved in the imitative *continuum* of Memory ; and thus, in fact, it is universally recognised that the criterion of excellence in any imaginative work, whether of the author, the actor, or the painter, is its truth to nature, that is to say, its imitative quality, so far, at least, as the natural things we view with most interest are concerned. We can only imagine in terms of past experience, though we can shake the mental kaleidoscope and recombine the terms. And, therefore, as Observation is accomplished by imitative sense processes, and as Memory is imitative also, and as the imaginative result in its highest excellence is imitative too, it follows that in imagination from start to

finish we are in the presence of a remarkably clear exhibition of the imitative law in human psychology.

I shall deal in conclusion with only one of the more concrete illustrations of the operation of the law of Imitation in human life, and that is in the processes of Education. I pass over those halcyon years in which parents watch over the early life of the children whom God has given them, and in which children learn to talk by imitating their elders, and acquire many fundamental ideas which will influence the whole of their lives from the tender precepts and examples which are afforded to them: it is sufficient to say that in this period all the psychological development is from the necessity of the case imitative. But let us send the child to school and what do we find? Of course in its games it imitates its fellows: but in the schoolroom it also imitates, in order to learn. First there is the alphabet: the child by repeated efforts of sight becomes familiar with the letters, that is to say, it has an imitative picture of each of them on its memory. It is then taught by the sense of hearing that certain combinations of letters represent certain sounds, and so it goes on in the imitative path until it can read. Then there is also the writing lesson. From *pot hooks* carefully imitated it rises through the gradations of large hand, round hand, and small hand, and by copying beautiful copper-plate moral axioms, but always by Imitation, to the status of a writer. And then there is the arithmetic, in which the child begins by learning to count, by learning its multiplication table, and so on through a long continued vista of imitative operations, until it becomes an arithmetician. And, not to weary you with detail, so the process goes on continually in relation to all the branches of knowledge with which the mind is stored, not only until school is left behind, but far into the years of mature life,

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and even, indeed, to its end. And who can say that in the life to come a new cycle of Imitation will not follow, whereby poor humanity will rise to a far higher and nobler development than any which the conditions and limitations of our earthly career hold within the range of possibility.

moulding character, and with it the standard of good and evil. The innate tendency to imitate is such that there is an unwritten code growing up with and at times interfering with the more positive code, and though this growth is most vigorous in early life, the process goes on continuously afterwards ; thus, in the adult, we get a complex standard, which is partly the result of precept, but has been and continues to be further modified by example and associations. Thus if a child is brought up amongst those who violate the positive code of morals as known to him in any respect, just in so far as the relations of propinquity are pleasing to the child of those who violate the code, so will he too look upon the offences as venial or as no offences at all. Brought up amongst smugglers he will think it right and manly to smuggle. If amongst those who drink to excess, he will view the positive crime of drunkenness, unless the reverse side of the medal happens by circumstance to be forced upon his notice, as a matter for mirth rather than for blame. If amongst poachers he will long for the time when he may share in the noble practice of stealing hares and pheasants, although he would scorn the idea of picking a pocket. And to pass, *per saltum*, to a more advanced period and more complicated relation of life, the youth or young man who has been so unfortunate as to learn his business or vocation in life, subject to the examples of those who practice evasion and chicane, will, if the general relations between him and them are complacent, come to look upon such things as practically right, because, as he will say, " others do them " ; and it is due far more to this than to any conscious graduation in dishonesty that there is so much shady and really wrongful conduct practiced in many departments of active life by some men whose theoretical moral code is of the strictest character. Even amongst

the "gilded youth," who might be supposed to be lifted by their position in life above the region of sordid considerations, there will be found those whose notions, acquired perhaps amongst the associations of the turf, will induce them to regard a gambling debt of so-called honor as of a higher degree of sanctity than an obligation due to a tradesman for a more legitimate liability. The inference from these data, which might obviously be much amplified, is then clear, and that is that the practical working idea of that which it is right to do or wrong to do is not the result of any reasoned theory of morals, but is an imitative process of the mind, originating with positive instruction at an age when the mind is still very plastic, and afterwards modified continually by a reflection of the current opinions of those with whom the human being is brought into contact, or by what may be termed, in fact, the complacent part of his environment. All this process of reflection is obviously imitative in its nature, and thus the law of Imitation is complete in its ethical sway under the combined influences of both primary instruction and subsequent modification.* If further evidence of a collateral kind to this effect is desired, it can obviously be produced abundantly from comparative Ethics, that is to say, from the comparative but largely varying standards of right and wrong which have existed at different times and among different nations. For actual illustration of this point I shall, however, for the sake of brevity, refer only to the history of the institution of slavery on the one hand, and that of the practice of duelling on the other; both of which exhibit in a very clear manner the comparative difference of standards referred to.

I take then the history of slavery first. Slavery is one

* It is interesting in this connection to note that the well-known golden rule—"Do to others," etc., is obviously imitative in its method.

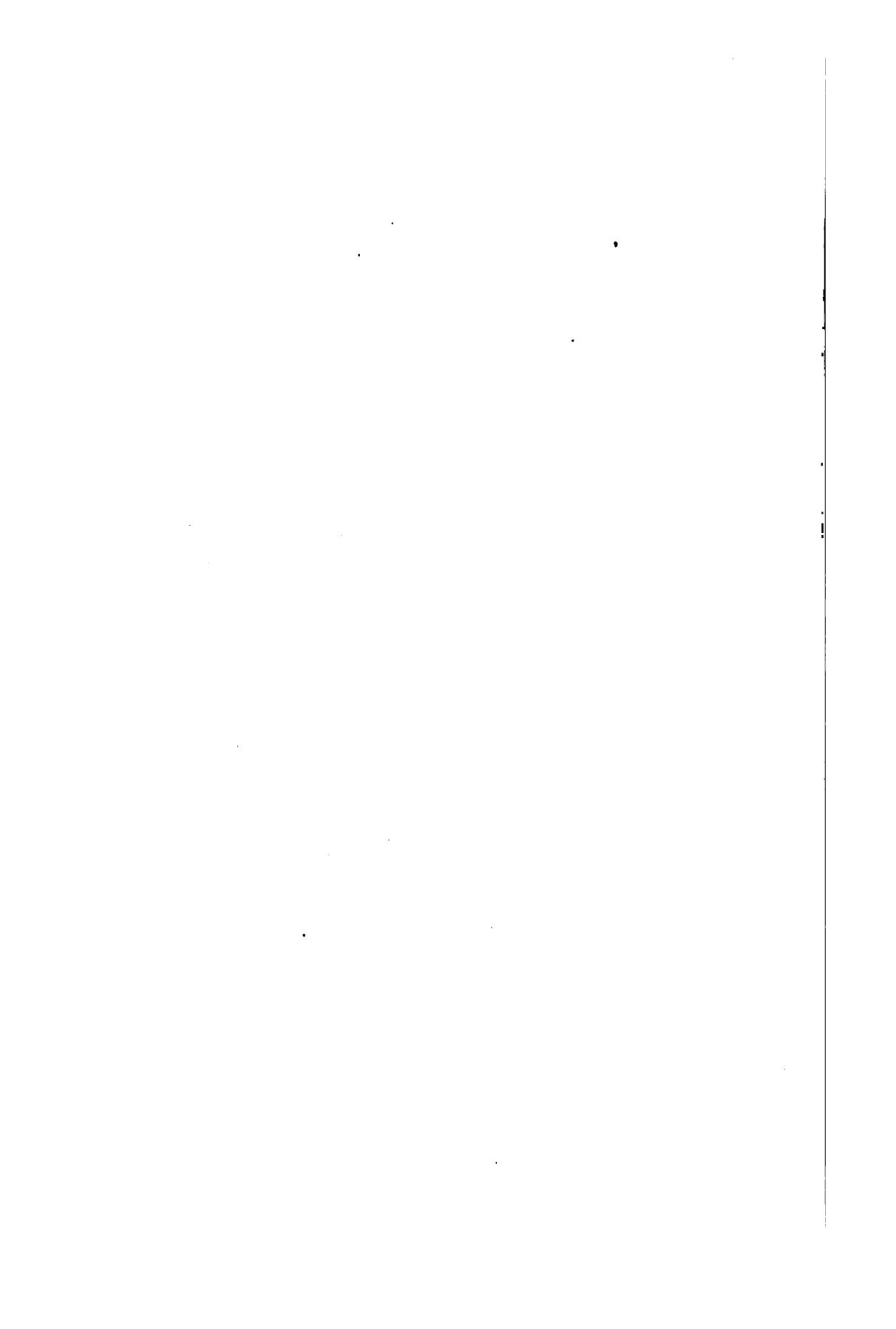
of the most ancient of human institutions, and was in its origin in all probability a distinct step towards a higher degree of civilization in the human race. The more savage tribes have rarely kept slaves. They destroyed their captives, and in many cases it is to be feared added cannibalism to slaughter, and thus primeval slavery actually represented an amelioration in condition of both the conquerors and the vanquished. Moreover, the slave trade was probably the first form of the beginnings of that commerce which has been one chief civilizing agency in human affairs. But the cruelties of the incidents attending slavery were always, to our modern notions, very great, and yet mankind for many hundreds of years never thought there was anything of wrong in the institution. Aristotle, the foremost representative of Grecian intellect in the palmy days of Greece, looked upon it as necessary and proper. Even Homer, although a great poet is always much in advance of the time in which he lives, whilst laying down in the *Odyssey* the maxim that—

Jove fixed it certain, that whatever day
Makes man a slave, takes half his worth away.

evidently did not regard the relation as being in itself a violation of right. Nor, indeed, has slavery ever been explicitly condemned by any of the great religious systems of the world, certainly not, at any rate, by the Jewish, Christian, or Mohammedan, all of which recognised it, although some of the loftier precepts of Christianity would be construed in the present day as antagonistic to it in spirit. But as a matter of fact, slavery in almost its worst and most cruel form existed late on in the eighteenth century, and also in countries otherwise civilized during a considerable part of the present century. The horrors of the slave trade never reached a greater

pitch than during those years in which slaves were still exported from Africa to the Brazils and to the United States: when the supply was kept up by natives on the dark continent by the burning of villages in order to capture helpless fugitives, who were afterwards packed beneath the hatches of trading vessels, and jettisoned like cargo if occasion arose. It was, indeed, these extreme cruelties attending the transport of slaves which first led the modern conscience to the idea that there was anything wrong in slavery at all, and it was by a tardy and slow process, extending from 1792 to 1864, that one country after another completely rectified its standard of right and wrong upon this subject by abolishing first the trade, and subsequently the institution itself; so that now in all civilized countries slavery represents one of the most heinous of crimes against our common humanity. No doubt there may have been at all times some, and in later times many, who objected to slavery in principle, but so far as the great bulk of mankind, and even the recognized teachers of mankind were concerned, the standard of right and wrong in this matter coincided with the positive legal code of the country in which they lived, and was indeed imitative in their minds of that which the law of the land permitted, and which was practiced by the communities of which they formed part. I do not know that there is a more conspicuous illustration upon record of the varying standard of morality than that which is offered by the institution, now happily becoming obsolete, of human slavery.

The history of duelling is our second illustration, and though narrower in its scope, casts a side light upon comparative ethics which even the practice of slavery does not give. And this is due to the singular but incontestable fact that just as the sanction of slavery might be regarded



THE LAW OF IMITATION IN ETHICS, RELIGION,
AND POLITICS, AND ITS RELATION TO
HEREDITY.

By RICHARD STEEL.

It must not be supposed that by Imitation, when we speak of a law* of Imitation, is meant conscious imitation only. This becomes obvious from the very fact that in the assertion of the law it was suggested as being true of inanimate as well as animate nature, and is clear indeed also from the consideration that in living beings instinct, one of the dominant but in its origin unconscious incidents in biology, is likewise referred to as exhibiting a phase of its action. I am not, indeed, fond of the word Imitation, partly for the reason that it is apt to be taken in a narrower sense than that which I desire to ascribe to it, but there is no other term known to me which so nearly describes the all-pervading imitative influences which are induced in natural units by other natural units. And there is no etymological inaccuracy in this use of the term. Like many other words it has a recognized variety of meanings, all of which are legitimate and closely allied to each other, though the primary sense of it in popular usage, and in the usage of some well-known scientists as well, would, if that stood alone, be perhaps open to the limited construction referred to in my opening sentence.

It has been suggested to me, further, that in dealing with the law as relating to psychology, it would be more

* I use the word "law" without any intention of connoting too much by the term, but simply as the most convenient and legitimate expression for a nexus, analogy, or generalization, binding a number of varied facts and phenomena within one conception.

correct to have described the ideas derived from the senses as "presentations" rather than "imitations." But this objection will hardly hold the field when we remember that "presentation" is simply a less definite term which does not connote the essential circumstance that the sense presentations referred to are of the nature of *resemblances* or *copies* of the things observed. It is of course possible to assume that we really know nothing of the objects we become aware of through the senses, and that it is impossible, therefore, to be sure that mental presentations are really imitative in their character. But this is simply to abandon the doctrine of Natural Realism upon which, as a philosophical foundation, all positive knowledge of external objects is necessarily based. It *may* be true that "things are not what they seem," but if this pronouncement is to be taken as the basis of reasoning, it evidently destroys all external knowledge, and resolves everything which we *think* that we know into a body of disconnected indeterminate equations: and reduces the world around us to a chaos without form and void, in which we human beings simply inhere like molluses, each individual imprisoned within the dungeon in which his self consciousness has play.

To revert, however, to the meaning of the term Imitation. In a comprehensive theory such as we have in hand, where many different phenomena of different kinds are referred to the one law, it is clear that the widest definition, so long as it is coherent and reasonable, is the best, for the wider includes the less wide, and thus takes in phenomena which a narrow definition would exclude. And I think that the recognised use of the term in the science and art of music gives a useful suggestion as to the possible legitimate range of its meaning. Herein, we learn that Imitation "is the process or act of repeating a

melodic phrase or theme either at a different pitch or key from the original, or in a different voice part, or with some rhythmic or intervallic modification so great as not to destroy the resemblance.*” In this conception of Imitation we have a degree of elasticity greater than any I have hitherto assumed, and it is interesting in passing to note that, under this authoritative construction of the term, we have a present illustration of how the law contended for could be made to apply directly within a sphere of sense impressions which has conveyed delight and intellectual satisfaction to humanity from the days of Jubal and of Orpheus.

Apart from making provision for the immediate physical requirements of nature, the subjects of thought, which occupy by far the largest part of most men's minds, are three in number, that is to say, Ethics, Religion, and Politics. And, whilst putting Ethics in the front rank of the triad, I do not hesitate to admit the fact that the great majority of mankind would disclaim any such statement so far as they were concerned. For just as Molière's celebrated character had been talking prose all his life without being aware of it, so also does it happen that the term Ethics conveys to a large number of persons a distasteful idea of vague philosophizing upon which they would not wish to spend any portion of their thought, but which they would rather leave to learned professors, as they would the allied subject of metaphysics.

Under the more familiar aspect of a theory of *that which is right and that which is wrong*, which, after all, is the whole real core of Ethics; and without conceding anything further in the dread direction of abstract thought, it will be found, however, that men will generally

* *Century Dictionary.*

admit that such considerations do indeed play a large part in the operations of their minds; and thus it comes about that our initial proposition is true of Ethics, although the technical term does not always commend itself to the public taste.

It is evident, moreover, that these three subjects of Ethics, Religion, and Politics, are largely interdependent with each other. There is no form of religion which does not assert pretty definite ideas of right and wrong as associated with it. Indeed, to many, if not to all, religious form in one important aspect is essentially a doctrinal teaching of what constitutes right and wrong, possessing at the same time a supernatural and divine sanction or authority. I do not, of course, say or believe that such a view of religion is complete in any sense, but it is correct so far as it goes, for there is no existing form of religion which does not lay down authoritative precepts to guide the conduct of its adherents, and which does not indicate within broad limits that which is right and that which is wrong.

So again with Politics. However much the lines of political thought may vary, there is always one idea running through all their modifications, and that is the good of the political unit or community. Even a despot, and the supporters of a despotism, whilst reserving to themselves primarily the personal advantages of their positions, do no doubt, so far as they think outside those positions at all, honestly believe that their modes of administration are, all things considered, best for the community of which they form parts; and, on the other hand, in all representative and democratic communities, the idea is certainly dominant that in such a degree of democratic institutions as they possess is to be found a clear advantage to the general good. There is thus here

again a tacit appeal to a standard of right and wrong, though it is not necessarily the same standard as the religious one. For it is only in a theocracy that the two standards, the religious and the political, merge into one, and under all other forms of government the divergence is more or less complete. Broadly speaking, the political standard is that of expediency ; that is right which is good for the community, and that is wrong which is adverse to its good.

It is thus clear that Ethics lie near the roots of both Politics and Religion, and may indeed be regarded from the non-controversial point of view of these subjects as an original element in both. In this limited aspect, Religion becomes simply a derivative of Ethics, and Politics a more complex derivative : for whereas, in Religion, the standard of right and wrong is in the main authoritative, the standard in Politics is mixed ; this last appealing partly to the various religious standards in the minds of men, but also still more largely to the expediency to which we have referred. It is not that there is necessarily any inconsistency in this attitude as regards politics. For whilst all men would willingly admit in theory the superior authority of the religious standard, most men would in practice agree that, in large and complicated matters of public policy it is very difficult to apply the religious standard at all, and that for all working purposes communities must look to probable results, that is to say, to expediency, in a fair and honourable construction of the term.

An easy illustration of this may be found, for example, in the views of all civilised communities with regard to war. It is evident that war in the abstract is a hateful and terrible thing, which in its action violates all the fundamental precepts of Christianity, and would therefore

be condemned by the positive and authoritative code of Christian morality. But the question of conducting a war being a political one, expediency comes in as the further standard of what is right or wrong in the special case, and thus, whilst we have the two standards interfering with each other in the judgments of even the most religious men, it is the doctrine of expediency that comes to the surface as the practical rule of conduct.

For our present purpose, however, all we have to observe is the intimate relation existing between these three subjects of human thought. I now desire to point out the origin of our ideas in relation to them, and to consider each of them separately in order to obtain some further illustrations which can be obtained by doing so—not forgetting, however, that as Ethics enter into both Religion and Politics, so it must be in the department of Ethics that our main demonstration must necessarily lie.

As regards then our notions of good and evil, it is well known that there are practically two ways in which such can be viewed. Either the standard of right and wrong is a matter of authority or it is a matter of ultimate Utility, defined as the greatest good of the greatest number. But however good these aspects may be as giving to us a logical theory of the sanction which lies behind systems of right and wrong, it is quite clear that in actual practice, upon the part of the great majority of the human race, neither theory quite fits in with the facts of conduct. For, on the one hand, no one really weighs up probable consequences to the community as a whole in all their possible developments as the criterion of right and wrong in his action; nor is anyone on the other hand solely guided in his sentiments as to right and wrong by any authoritative standards, whether of religion or of law: these last do, no doubt, govern a great deal of the ground.

of his ethical decisions, but in few, if any cases, do they control the whole of them. For there is a vast area of action and behaviour in regard to which dogmatic authority has nothing to offer in the way of mandate, and it is nevertheless true that within this area the consideration of right and wrong still pervades the mind, and causes the conscientious man to think that he is acting rightly or otherwise, ignoring the fact that he is outside of the region of any positive code unless, indeed, in some cases it be that of the opinion of the society in which he moves.

All this is true of even the most reflective minds: it is still more true of the vast majority of mankind. And it will be found that the real working law upon which mankind base the rightfulness and wrongfulness of conduct is at bottom purely imitative. For if there is anything innate in such notions, it is clear that in so far as they are innate they are necessarily imitative of pre-existing ideas of a similar kind in either an ancestor or in the Creator. And in so far as they come into existence during life, the primary foundation must be laid in the teaching of parents or those who stand in that capacity; the infant and young child are taught that certain actions are wrong, and that others are right; and with the impressionable docility of early life, these ideas become indelibly fixed in their youthful minds; being really imitative presentations of these same ideas as conveyed by the parental authority. And so again, in later life, the teachings of the elders, and of religion, make further impressions, and the standard of right and wrong grows by a continuous process of accretion. But, coincidentally with the whole time, there is a further influence at work in the example of those with whom the human being is brought into favourable contact. This begins even in the nursery, is very active during the school age, and is one of the most powerful influences in

moulding character, and with it the standard of good and evil. The innate tendency to imitate is such that there is an unwritten code growing up with and at times interfering with the more positive code, and though this growth is most vigorous in early life, the process goes on continuously afterwards; thus, in the adult, we get a complex standard, which is partly the result of precept, but has been and continues to be further modified by example and associations. Thus if a child is brought up amongst those who violate the positive code of morals as known to him in any respect, just in so far as the relations of propinquity are pleasing to the child of those who violate the code, so will he too look upon the offences as venial or as no offences at all. Brought up amongst smugglers he will think it right and manly to smuggle. If amongst those who drink to excess, he will view the positive crime of drunkenness, unless the reverse side of the medal happens by circumstance to be forced upon his notice, as a matter for mirth rather than for blame. If amongst poachers he will long for the time when he may share in the noble practice of stealing hares and pheasants, although he would scorn the idea of picking a pocket. And to pass, *per saltum*, to a more advanced period and more complicated relation of life, the youth or young man who has been so unfortunate as to learn his business or vocation in life, subject to the examples of those who practice evasion and chicane, will, if the general relations between him and them are complacent, come to look upon such things as practically right, because, as he will say, "others do them"; and it is due far more to this than to any conscious graduation in dishonesty that there is so much shady and really wrongful conduct practiced in many departments of active life by some men whose theoretical moral code is of the strictest character. Even amongst

the "gilded youth," who might be supposed to be lifted by their position in life above the region of sordid considerations, there will be found those whose notions, acquired perhaps amongst the associations of the turf, will induce them to regard a gambling debt of so-called honor as of a higher degree of sanctity than an obligation due to a tradesman for a more legitimate liability. The inference from these data, which might obviously be much amplified, is then clear, and that is that the practical working idea of that which it is right to do or wrong to do is not the result of any reasoned theory of morals, but is an imitative process of the mind, originating with positive instruction at an age when the mind is still very plastic, and afterwards modified continually by a reflection of the current opinions of those with whom the human being is brought into contact, or by what may be termed, in fact, the complacent part of his environment. All this process of reflection is obviously imitative in its nature, and thus the law of Imitation is complete in its ethical sway under the combined influences of both primary instruction and subsequent modification.* If further evidence of a collateral kind to this effect is desired, it can obviously be produced abundantly from comparative Ethics, that is to say, from the comparative but largely varying standards of right and wrong which have existed at different times and among different nations. For actual illustration of this point I shall, however, for the sake of brevity, refer only to the history of the institution of slavery on the one hand, and that of the practice of duelling on the other; both of which exhibit in a very clear manner the comparative difference of standards referred to.

I take then the history of slavery first. Slavery is one

* It is interesting in this connection to note that the well-known golden rule—"Do to others," etc., is obviously imitative in its method.

of the most ancient of human institutions, and was in its origin in all probability a distinct step towards a higher degree of civilization in the human race. The more savage tribes have rarely kept slaves. They destroyed their captives, and in many cases it is to be feared added cannibalism to slaughter, and thus primeval slavery actually represented an amelioration in condition of both the conquerors and the vanquished. Moreover, the slave trade was probably the first form of the beginnings of that commerce which has been one chief civilizing agency in human affairs. But the cruelties of the incidents attending slavery were always, to our modern notions, very great, and yet mankind for many hundreds of years never thought there was anything of wrong in the institution. Aristotle, the foremost representative of Grecian intellect in the palmy days of Greece, looked upon it as necessary and proper. Even Homer, although a great poet is always much in advance of the time in which he lives, whilst laying down in the *Odyssey* the maxim that—

Jove fixed it certain, that whatever day
Makes man a slave, takes half his worth away.

evidently did not regard the relation as being in itself a violation of right. Nor, indeed, has slavery ever been explicitly condemned by any of the great religious systems of the world, certainly not, at any rate, by the Jewish, Christian, or Mohammedan, all of which recognised it, although some of the loftier precepts of Christianity would be construed in the present day as antagonistic to it in spirit. But as a matter of fact, slavery in almost its worst and most cruel form existed late on in the eighteenth century, and also in countries otherwise civilized during a considerable part of the present century. The horrors of the slave trade never reached a greater

pitch than during those years in which slaves were still exported from Africa to the Brazils and to the United States: when the supply was kept up by natives on the dark continent by the burning of villages in order to capture helpless fugitives, who were afterwards packed beneath the hatches of trading vessels, and jettisoned like cargo if occasion arose. It was, indeed, these extreme cruelties attending the transport of slaves which first led the modern conscience to the idea that there was anything wrong in slavery at all, and it was by a tardy and slow process, extending from 1792 to 1864, that one country after another completely rectified its standard of right and wrong upon this subject by abolishing first the trade, and subsequently the institution itself; so that now in all civilized countries slavery represents one of the most heinous of crimes against our common humanity. No doubt there may have been at all times some, and in later times many, who objected to slavery in principle, but so far as the great bulk of mankind, and even the recognized teachers of mankind were concerned, the standard of right and wrong in this matter coincided with the positive legal code of the country in which they lived, and was indeed imitative in their minds of that which the law of the land permitted, and which was practiced by the communities of which they formed part. I do not know that there is a more conspicuous illustration upon record of the varying standard of morality than that which is offered by the institution, now happily becoming obsolete, of human slavery.

The history of duelling is our second illustration, and though narrower in its scope, casts a side light upon comparative ethics which even the practice of slavery does not give. And this is due to the singular but incontestable fact that just as the sanction of slavery might be regarded

as an inadequate view of Utility, and therefore essentially political, so that of duelling was originally religious. The duel was the natural successor of the old system of trial by combat, which in ruder days was regarded as a direct appeal to the justice of heaven. It was really also a comparatively modern practice; for such episodes as that of Menelaus and Paris in the third book of the *Iliad*, and of David and Goliath in Scripture, can hardly be regarded as of the nature of duels, but were rather instances of those single combats of which, upon the large scale, from the nature of the weapons used, ancient battle necessarily consisted. The judicial combat, of the preliminaries of which Shakespeare has preserved a picture in his play of Richard II, as between the son of "old John of Gaunt, time-honoured Lancaster," and the Duke of Norfolk, was, of course, in accordance with the higher moral standard as then held, in its origin, and by a process of natural succession the duel of honor succeeded to it. And there can be no doubt that, to men with whom a certain chivalric sentiment was as the breath of their nostrils, a duel in maintenance of the fancied obligations of honor appeared to be the fulfilment of a duty. Although the law of England even down to 1817 actually sanctioned judicial combats in certain cases, the private duel was always contrary to the law: and those who hazarded their lives in this manner ran also the risk of being punished for murder. Yet, the influence of the opinion of society, and the inherited opinion of the day, though in opposition both to the plain precepts of religion, and to the common law as well, was such that men of the first rank, such as Fox, Pitt, Canning, O'Connell, and the Duke of Wellington, all in their time took their places in the duelling field. Sheridan was out twice, and perhaps we have no finer illustration in English literature of the feeling of his day.

on the subject than is to be found in his admirable comedy of *The Rivals*, in which the obvious arguments against the personal expediency of duelling are placed only in the mouth of the meddlesome serving-man and mentor of Bob Acres.

I need hardly add that, whilst obsolete in England, duelling is still practised on the Continent: in Germany, as a military duty; in France with chivalric politeness and great frequency, but happily very rarely with serious consequences; and in both as a duty which men of honor owe to themselves and the society to which they belong. In our own country no indulgence would now, however, be shown by her Majesty's judges and juries, or by public opinion, to either principal or accessory in a duel. And here again, therefore, we have proof of that variability of the standards of right and wrong to which I have referred in illustration of the fact that, however philosophers may theorize, the real working principle in this regard of human conduct is essentially imitative.

Let us now consider Religion shortly from a similar point of view to that from which we have regarded Ethics, remembering always that in dealing with Ethics we have already dealt with one of the positive aspects of religion, and need not therefore deal with that aspect any further. Religion in its highest sense has for its motive and essence the worship of a Superior Being, and the subject is so sacred that there is always a danger of hurting susceptibilities in referring to it at all. But as a matter of fact all we desire now to do in this review is to deal with religion in its lower and purely morphological aspect. And I have no hesitation in saying that, so far as this is concerned, religion in its special form and dogmatic faiths is necessarily, both as a matter of theory and actually as a matter of fact, thoroughly imitative. There are two broad

facts which are sufficient in themselves to prove this. The first of these is that, historically, the special forms assumed by religion have been almost purely a matter of race and descent. In the received classification of the older religions this is quite the fundamental fact, and even in the present experience of modern times, when freer intercourse and associations have done much to obliterate the old race lines, we still find that religious beliefs vary in the main according to the stock and origin of the peoples who hold these faiths, showing, as indeed we know, on *prima facie* grounds, that they are handed down from one generation to another by a traditional process which can only in substance be a continued imitation of ideas hallowed to the recipients by the assured faith of parents and ancestors. The other fact to which I referred, is correlative to the foregoing, and that is the small number of people who change their religious faith. Conversions do no doubt take place from one creed to another, but the number of such cases proportionately to those in which no such change takes place is very small, and they are simply of the nature of exceptions to the general rule; which is, undoubtedly, that an overwhelmingly preponderating proportion of mankind live and die in the form of religion in which they have been brought up.

And now we have to deal with the distinctive proof of Imitation in Politics as the remaining item of our associated triad. Here again we have to remember that Politics are overlapped by Ethics, and that so far as this is the case we do not need to go over again ground which we have already traversed.

Political opinions are very much less stable than religious faiths, and one reason for this is to be found in the fact that new combinations in public affairs are continually being formed. So much so, indeed, is this the

case that anything like a satisfactory analysis of political thought would occupy much time, and, indeed, as it happens, such a process is unnecessary for the further elucidation of the matter in hand. For it is all the more obvious as we regard the whirlpool of all sorts of opinions on a great variety of subjects which circle and tumble within the vortex of polities, that one chief fact only emerges as a permanent factor, and that is the nature of the government and administration of public affairs. The origin of the word Politics, indeed, primarily relates to this conception. And it is evident, as a matter of both historical and present political morphology, that there are in principle only two real modes of Government, absolutism on the one hand, and government by party on the other. Of course in actual practice there are all sorts of more or less complete compromises between the two, but I do not know of any further permanent element.

Now, Absolutism is a clear case of imitative method derived from remote antiquity, originating probably in patriarchal life, and consolidated by the requirements of military service. But its imitativeness is perhaps still more clearly evidenced by viewing its actual operation in our own days, in, say, a country like Russia. Why is it that nearly every Russian subject as he grows up submits with unquestioning docility to the autocracy of the Czar, and the authority of those who administer affairs in his name? Because, of course, he is taught to do so by his parents and tutors, and by all the administrative institutions of his country, until the idea of unquestioning obedience becomes engraved in his very nature. That there are some exceptions to this proves nothing, for they are exceptions only; and the same conditions are true, *mutatis mutandis*, of all despotically ruled countries, whether civilized or barbarous.

And where Government by party comes in exactly the same proposition is true. I have never yet heard of a representative assembly in which there were no parties; and the completeness with which party programmes, or platforms as they are sometimes termed, sway the members of the party is notorious. For one original thinker who weighs and measures the planks of the party platform, there are scores who follow the crack of the party whip with complete obedience. And if this is true of representative Chambers, constituted mainly of men of selected intelligence and ability, how much more is it true of the rank and file of the electorate itself. The political or party bias of the voter was originally derived in an imitative fashion from some of his associations, perhaps from relatives, perhaps in his workshop, perhaps from the newspaper which came most easily to his hands. But once the party bias has been established, it is in the great bulk of cases never changed, and it is indeed of the very essence of that which the large majority of voters look upon as a primary obligation of party loyalty to vote "straight" as it is called, that is to say, in the way which the leaders of the party desire. The adage that in political life one should sink minor differences is almost an axiom, and we should be quite within the mark in saying that ninety per cent. of most electorates adhere steadily to their party, and march as if with something like organized discipline to record their votes in the ballot box. It is not that the great majority of them have reasoned out their views, but because they have become imbued with them by the working of the great law of Imitation, both conscious and unconscious, with the result that even the symbolism of a party color—blue, red, green, or orange—is quite sufficient to lead a large number of voters to the polling station, and to determine the manner in which their marks upon the ballot paper shall be placed.

I claim therefore the right to summarize as a sound conclusion that, in these three important departments of human thought with which we have dealt, we find the law of Imitation as the chief primary directive influence, remembering always that, so far as regards religion, we have dealt with the matter only from the lower and morphological point of view.

It was my original intention to end this paper at the point we have now reached, but there is another phase of the operation of Imitation of so much importance and interest that I feel justified in trespassing for a few minutes more upon the time of the Society in dealing with it briefly. I refer to the influence of the law in Heredity, using that term, of course, in its biological sense. At first sight it may appear that in this regard Imitation, used in the sense I have attributed to the term, is only another and less desirable word than Heredity for expressing the same meaning. But this is not really so. By Heredity we mean the circumstance that like produces like: that characteristics of the parent are inherited by the descendant, and so forth.

And no doubt this is a special form of Imitation*, but then it only expresses a part of its action. The propinquity in this case of Heredity is the strong propinquity of descent, one of the most dominant forms that propinquity can assume. But it still remains true that descent is only one form of propinquity. There is no necessary clashing, therefore, whatever between Heredity and Imitation.

* It is of course evident that the Imitation of descent connotes and refers to the whole physical existence of the *natural units* affected. The chick differs very much from the egg, but egg and chick are stages or terms in the existence or life series of the same being; and it is the aggregate of this physical existence which constitutes the biological natural unit: in which the Imitation by the bird of one or both of its progenitors is completely exhibited, as the primary directive influence in its life history.

tion, the relation of the two being simply that the former is a special case of the latter, in my sense of the term.

When, however, we come to the theories of Heredity, which have been put forward by Darwin, Galton, and Weissmann, the case is rather different. It is quite true that Imitation is not at all inconsistent with any one of these theories, for the mechanical methods by which Heredity is accounted for in detail by these well-known biologists would, if accepted as correct, simply represent the way in which the general law operated in the special case. But then it is equally true that, if we are able to postulate a law of Imitation as a universal law of nature, which does not necessarily require the machinery referred to, the explanations given by the biologists become to that extent less necessary, and must be judged simply by their inherent probabilities as related to known facts, and without any *a priori* prepossession. And the difficulties arising out of these theories, having regard to the facts, appear to me to be practically enormous. Whether, as in Pangenesis, we are taught to think that there is a gemmule from every cell of the parent present amongst the protoplasmic cells from which the new being derives its origin; or whether, with Galton, we adopt the doctrine of stirps containing similar gemmules; or whether we adopt the theory of a continuous germ-plasm, it seems to me that we are confronted with the vast mechanical difficulty of so much incipient capacity of differentiation being inherent and contained in so small a space. Indeed, if we suppose the whole fauna of the world, leaving the vegetable kingdom out of consideration altogether, to be derived from one original protoplasmic source, we have to admit, if any one of the theories referred to be taken as correct, that one original unit contained within itself, as a sort of microcosm, all the incipient roots of differentiation

of the myriads of creatures, and their distinctive functions also, which have succeeded it. Having regard to the vast number of these creatures and their distinctive functions, and to the fact that the differentiation is still going on apparently without limit, this would be in effect to assert that the original molecule or molecules of the first protoplasmic cell were practically infinitely small in bulk, which, mathematically, no doubt, is a perfectly reasonable conception. But then, on the other hand, authorities upon molecular physics contradict flatly such an assumption. We are told that the size of a molecule may be definitely expressed between limits. Thus, for example, Lord Kelvin tells us that if a drop of water is magnified to the size of the earth, the molecules or grannules would each occupy spaces greater than those filled by small shot, and smaller than those occupied by cricket balls.

The reference here is no doubt to chemical molecules, not to the biological primitive unit; but then we also know that protoplasm is a compound of chemical molecules, carbon, nitrogen, oxygen, and hydrogen being always present; and therefore each primitive unit of protoplasm cannot be less than, say, four chemical molecules, and is therefore not infinitely small.

I cannot but, therefore, come to the conclusion that as changes due to the law of Imitation (and in using the term "law" here I use it now as always in this paper in the sense of a rule or method to which things continually tend to conform), imply a law which does not necessarily act through the vehicle of gemmules, stirps, or plasma; and as, moreover, it will account in a fashion for all biological differentiation when taken in conjunction with the laws of natural selection and survival of the fittest; so also do the theories of heredity to which I have referred lose any

element of probability which arises from the *prima facie* fact that the course of events implied by heredity does actually take place, and the suggested supposition that there is no other way of accounting for this. The assumed existence of gemmules, or of stirps, of which no microscope has ever shown any trace of evidence, becomes an unnecessary assumption, and is therefore disallowed by the law of parsimony; and I think also by the corresponding natural truth that nature attains her ends in the simplest manner available. The probability of the types of all future differentiation being contained within the limit of the primitive jelly speck of a protozoic cell is less than that of a theory which does not necessarily imply anything of the sort, but simply assumes Imitation as an inherent function of things in themselves, without asserting that the method of its action is either absolutely intrinsic, or to some extent extrinsic in its character.

I am quite aware, let me say in conclusion, that it is impossible to treat the problem of Heredity at all completely without also taking into consideration the relations to it of the phenomena of habit and instinct: these also, however, will be found to furnish very clear evidence of the influence of Imitation* within their purview. But it is not possible to adventure upon so wide a field upon the present occasion, and therefore the foregoing remarks may be taken to apply to Heredity, primarily though not exclusively, in its more morphological aspects.

* Since writing the foregoing, I have become aware that the term Imitation has been largely used by Romanes and others in a much more limited sense than that in which I have used it. This does not, however, affect the argument in the text, nor preclude the desirability of giving to the word, as I have done, its fuller etymological scope.

NOTE UPON HABIT AND INSTINCT IN RELATION
TO IMITATION.

By RICHARD STEEL.

THERE is no other influence the action of which upon human behaviour is so universally recognised as that of Habit. The word has several accepted meanings, being applied to clothing and also to physique, but the principal use of it undoubtedly relates to the familiar fact that human beings acquire a tendency to act in a particular way almost automatically from the mere repetition of what were originally acts of full consciousness and volition. Even the most trifling details of existence, as well as some of the more important, become largely controlled by Habit; the hour at which we rise in the morning; the times at which we take our meals; the manner in which our daily time is distributed, whether in business or pleasure; all become so influenced. Habitual functions such as these are essentially periodic, that is to say, they tend to recur at approximately regular intervals of time, and whilst some of them may be regarded as almost vital and necessary, Habit, as such, does not recognize much distinction between those acts which are advantageous to the human being and those which are injurious in their consequences. Of these last, for example, the craving arising out of intemperate habits is a sufficient illustration; and thus, indeed, the statement that man is a bundle of habits becomes a formidable truth, which meets with much exemplification from the experience of every one.

The genesis of Habit is simple. It arises out of an

innate tendency, more especially conspicuous in the young, who are always overflowing with superfluous activity, to repeat an action if its first result has not been unsatisfactory; and from the further tendency which is engendered by frequent repetition for that act to become easy and even necessary. By a sufficient amount of repetition it ultimately becomes a confirmed habit, and becomes almost built into the very constitution itself of the individual. And we have in habits of this order an excellent illustration of the two-fold way in which the phenomena of human action can be viewed. In consciousness each of us is aware of the individual voluntary acts by which habits are set up, and we are conscious when they are fully acquired of the desire or craving which arises when the periodic time arrives at which the self-created requirement asks for satisfaction. And in direct correspondence to this recurring *series* in consciousness, there is in some cases a physical adjustment which has been set up in the material which constitutes the bodily framework.

There are in addition to these, which are always regarded as habits, a number of other habitual forms of human activity to the origin of which the term "Habit" is not usually applied, but which, nevertheless, are of the same nature as the better recognized conscious habits, though in them the conscious foundation has been so completely obliterated by frequent use that we have come to look upon them as reflex actions. That some of them are true habits, however, becomes evident if we examine them by a method of series or gradual approach. Consider, for example, with this object, the locomotive activities of a human being, and let the series be represented by walking, swimming, and some other movement of an artificial character, as, say, skating. In all of these alike

there is a wonderful co-ordination of nervous and muscular effort, which in the expert has reached the status of practical unconsciousness. But in skating, to take first the most artificial item of our series, we know very well that the form of activity and the necessary co-ordinations are acquired very consciously, for they are dependent upon highly artificial conditions, and everyone who has practiced it can remember the time when he was less proficient in the exercise, and is aware that it has been by frequent practice, that is to say, by repetition of effort, that he ultimately acquired the natural and easy poise which enables him to conduct those complex evolutions which it gives him so much pleasure to engage in. In the case of swimming, however, the circumstances are simpler than in those of skating, for here there is no artificial condition necessary, and yet here also it is only by repeated and well-recollected effort that anyone acquires the muscular and nervous co-ordination that enables him to become a swimmer. And now, as I particularly wish to observe, the same fact is true of walking, the last item of the series, that is to say, this art also is acquired by practice and repetition, but in this case the lesson has been learned so early in the life of each individual that no one ever remembers having learned, as he nevertheless did, by repeated efforts to toddle across a room. The fact thus becomes clear that some processes which, like walking, appear to be practically reflex and automatic even early in life, are really cases of Habit built up by repetition.

Before we go further, let me point to the conclusion already deducible from the consideration of these few forms of habit to which we have referred. They are all due, as habits, to repetition. But what is repetition? It is the doing again that which the human being has done before; that is to say, it is, in the large sense which I con-

nect with the word, due to a process of Imitation of self in previous actions, and thus Habit in its processes is an exemplification of the law of Imitation in one of its clearest aspects. This is true of the human unit itself; it is also true of the physical components of which his body is made up; for when nervous and muscular tissue are consumed by exertion, so also are they replaced by new matter specially charged with an imitative resemblance to that which has already done its work and passed away in the perpetual round of nature's activities; the resemblance being a definite inference from the fact that the new tissue comes into existence to do precisely the same kind of work as was done by that which it replaces.

There are, of course, very many habits to which I have not referred, and there are also bodily functions which may, on evolutionary grounds, be regarded as survivals of anciently formed habits of organisms very far distant in that long line of descent which leads from protozoic life to the status of humanity. Such is the process by which food and food products pass through the body; commencing with the conscious acts by which food is placed in the mouth and masticated; followed by the act of swallowing, which becomes automatic only when the food has reached a certain position at the back of the tongue; and followed further by the peristaltic action which takes place in the alimentary and other receptacles, and by which it is passed on continually until absorbed or eliminated. There is the breathing, which is still partly under the control of the will, but which at a certain stage of necessity, escapes from that control. But it is not necessary for me to enter into further detail with regard either to unquestionable habits, or processes analogous to them. The broad fact to which I wish to draw attention is that just as the life-history of a human being is of the nature of a series

varying from term to term, so also many of the processes, both mental and physical, of which that life is the integrated total, are of the nature of series also, auxiliary to the main series of the life-history of the individual, and related to each other by consequence both directly and indirectly.

All these processes partake obviously of the nature of Habit, and as Habit is built up by Imitation of self, we see at once how important is the bearing of that principle upon human behaviour in a way quite outside of those other matters in which I have previously traced its influence.

I now take Instinct as a further example of the action of Imitation. And *here* it is evident that we at once take leave of the purely human standpoint which we have hitherto adopted in discussing the operation of the law. Human beings have indeed no monopoly of Habit itself, but so far as Instinct is concerned they have not only no monopoly, but they have, in fact, to use a common expression, to take a back seat, the instincts of the lower creation far surpassing those of man in relative volume and keenness.

The general position of naturalists with regard to Instinct is that it is congenital, and that it in this respect contrasts with Habit, which they regard as acquired by the individual. But it is also held by eminent writers, among whom are Darwin, Wallace, and Romanes, that *some* habits are inherited. Now it is quite clear that if some habits are inherited, this is only another way of saying that such habits are congenital; and so far as they are concerned, the distinction between them and Instinct disappears, for I do not see how any distinction can be maintained between an Instinct and a congenital Habit.

Romanes, moreover, goes further, and defines Instinct as reflex action, into which there is imported the element of consciousness,* and as the perfected effect of Habit is ultimately to establish just this exact condition of reflex action accompanied with the element of consciousness, the identity of inherited Habit with Instinct is upon his theory surely evident. It is true that Romanes discriminates instincts into two categories; those which originate, like incubation, under the law of natural selection; and those which are set up by the effects of Habit in successive generations; but to my mind both of these are reducible to inherited Habit; avowedly so in the one category, and clearly also by inference in the other; the only difference being that in the case of natural selection only having been at work, the habit *may* have been unconscious in its origin; but whether the origin of the habit is conscious or not, its inheritance is still the foundation of the instinct.

It must be admitted, however, that Romanes does not express the unanimous opinion of naturalists on the inheritance of habits. Weismann does not, under his theory of Heredity, admit it; but a recent writer, Professor Lloyd Morgan, who, I think, agrees with Weismann generally in his views, nevertheless speaks of acquired habits being transmitted through *tradition* like, as he says, so many of the social customs of mankind. It is true that there is a distinction here between tradition and inheritance so far as habits are concerned; but for my purpose this is not material. Tradition is evidently a case of Imitation. So that when summarized our argument runs thus. All habits arise out of Imitation of self; instincts are resultants of inherited habits; and therefore instincts are the result of Imitation; and, moreover, in so far as we substitute the idea of tradition for that of

* *Mental Evolution in Animals*, p. 159.

inherited habit, this also is an obvious case of Imitation in the large sense in which I use the term. So that all the phenomena of Instinct, as well as of Tradition, are incidents arising from the same general law of Imitation, just as we have seen is the case with Habit itself.

I do not see how it is possible to escape from the conclusion just stated, but my dissertation would not be as complete as it can be made if I did not point also to the corroboration which these views receive from the expressed views of some great naturalists on the subject of Imitation in their own senses of the term.

First I take Wallace. He frequently refers to imitation in his *Theory of Natural Selection*, and it is to be noticed that in his use of the word he does not at all restrict himself to *conscious* imitation, but uses it frequently in cases where any conscious element of copying cannot be supposed to exist. Thus he tells us, *inter alia*, of Lepidoptera "imitating" other species; that certain Coleoptera or beetles "imitate" other Coleoptera; that some moths and beetles "imitate" other insects, and insects of other orders "mimic" beetles. He deals with the facts of mimicry in most interesting detail, and dwells upon the general harmony in nature between the colours and markings of animals and those of their habitation. And he distinctly comes to the conclusion "that the peculiar notes of birds are acquired by imitation, as surely as a child learns English or French, not by instinct, but by hearing the language spoken by its parents."

Romanes formulates the influence of imitation very distinctly. With him it is on the whole a conscious process, but he assigns very great importance to it as being "a mode whereby intelligence may change or deflect an instinct." He points out that some birds are able to imitate songs having a proper musical notation, and observes

that a child begins to imitate very early in life, and that the faculty goes on developing during the first year or eighteen months; and concludes generally "that the faculty of imitation is one very characteristic of a certain area of mental evolution, and therefore that within this area it must conduce in no small degree to the foundation of instinct." *

Professor Lloyd Morgan goes still further in the importance he assigns to imitation; but with him the use of the word is limited to the more conscious varieties of the function, and under these heads he assigns very great importance to it. I may fairly indicate his view of the matter in his own words:—"That imitation, or what we are accustomed to regard as such, is an important factor in animal life, especially among gregarious animals, is scarcely open to question. But the biological and psychological conditions are not easy to understand. Some forms of imitation are often spoken of as instinctive; but some are voluntary and under the guidance of intelligence. . . . And the exact nature of the connection between this conscious and voluntary imitation and the involuntary instinctive process to which we apply the same term, requires careful consideration." †

The fact that men so well able to judge have recognized the importance of Imitation in a more limited sense of the term is a very material corroboration of the theory I have ventured to put forward.‡ It is true that the term Imitation is used by these naturalists in more limited senses than I have assigned to it; but although the senses

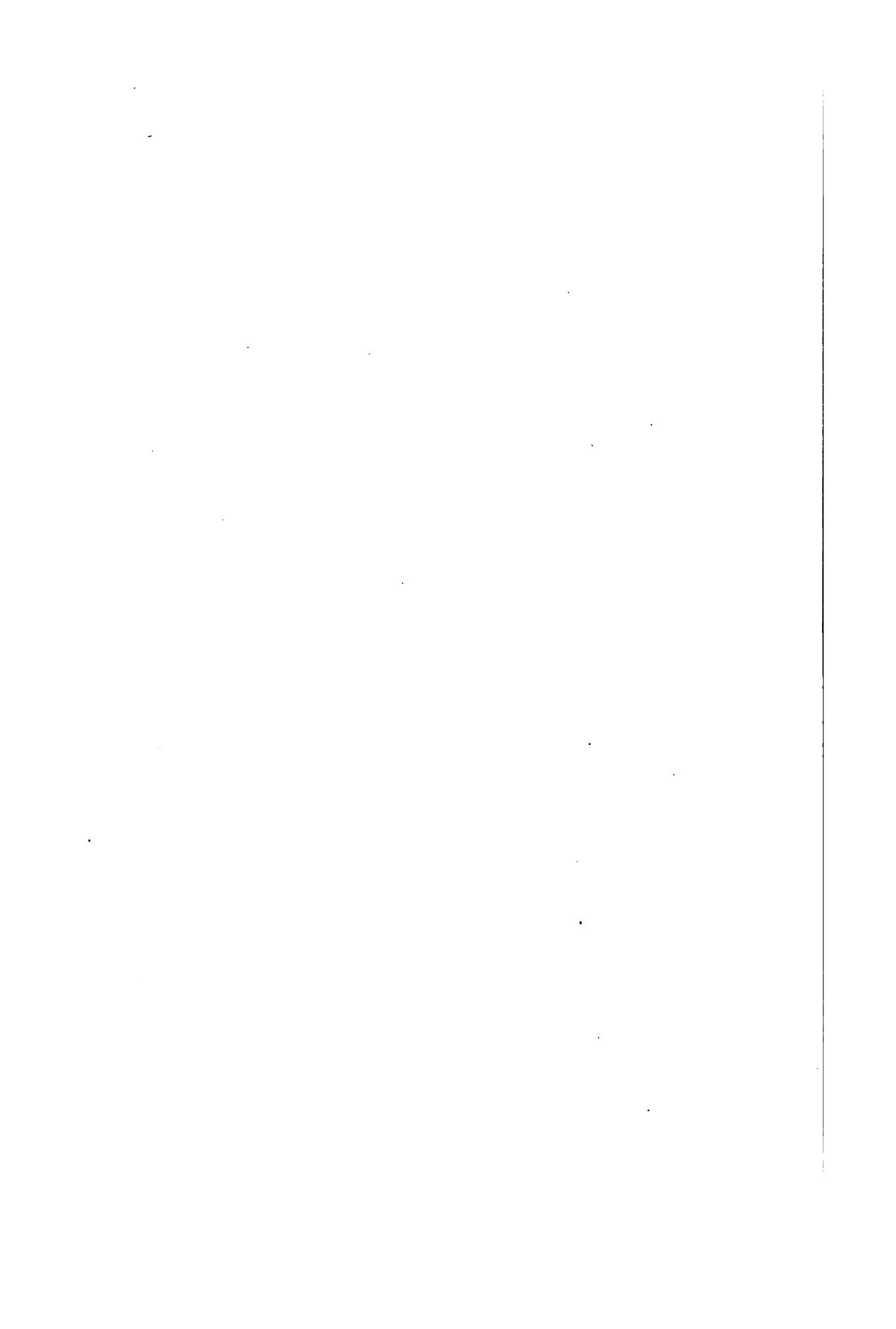
* *Mental Evolution in Animals*, p. 225.

† *Habit and Instinct*, p. 166.

‡ As applying to another part of the subject, with which I dealt in my last paper, I have been interested to find that the late Walter Bagehot, in his *Physics and Politics*, draws attention to Imitation as a factor in nation-making. The essay will well repay perusal, and I am glad to find that it is quite in harmony with my own theory.

are more limited, they do not fail to be included in my own idea, and thus all that they say of Imitation becomes relevant to the suggested law, for although not the whole it is part of the truth. The only difference is that the factor which they consider to be of great importance becomes amplified in my view, and is thus invested with a still more extensive sway.

That the principle of Imitation holds good also in the vegetable kingdom, from which the whole existing protoplasmic matter of animal life is derived, is equally demonstrable, but the next step *outwards* necessary to illustrate this must be taken upon some future occasion.



MODERN VIEWS OF MATTER.

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INTRODUCTION AND ABSTRACT.

THIS autumn, the British Association will meet at Bradford. Twenty-seven years ago it met at Bradford, and one of the evening lecturers was Clerk Maxwell. His lecture was much more than a lecture, it was an eloquent popular exposition of the state of our knowledge concerning Molecules, by a master and one of the founders of the modern science.

If secondary education in this country were what it might be, a classical memoir such as this should be, so to speak, taught in schools and be familiar: but we are far indeed from any such ideal, and one of the difficulties in expounding recent progress in science is a difficulty not felt in expounding recent progress in other subjects, for instance, in History; and a great aid it must be to a lecturer on recent historical discoveries or political affairs that so much of the elementary ground is already common knowledge. But in scientific subjects at present, alas, there is no common knowledge. Nothing has been learnt at school, or next to nothing; and only here and there, in an audience such as this, can we find persons who have the initial information enabling them to appreciate recent advances.

It was my privilege to attend that meeting of the British Association in Bradford, and to hear Clerk Maxwell's lecture on Molecules. With the possible exception of

a much more elementary lecture of Tyndall's on Heat, at some years' earlier date, it was the most absorbing lecture I ever listened to. Its introductory paragraph will serve as an introduction to my paper this evening.

"An atom is a body which cannot be cut in two. A molecule is the smallest possible portion of a particular substance. No one has ever seen or handled a single molecule. Molecular science, therefore, is one of those branches of study which deal with things invisible and imperceptible by our senses, and which cannot be subjected to direct experiment.

"The mind of man has perplexed itself with many hard questions. Is space infinite, and, if so, in what sense? Is the material world infinite in extent, and are all places within that extent equally full of matter? Do atoms exist, or is matter infinitely divisible?

"The discussion of questions of this kind has been going on ever since men began to reason, and to each of us, as soon as we obtain the use of our faculties, the same old questions arise as fresh as ever. They form as essential a part of the science of the nineteenth century of our era as of that of the fifth century before it.

"We do not know much about the science organisation of Thrace twenty-two centuries ago, or of the machinery then employed for diffusing an interest in physical research. There were men, however, in those days, who devoted their lives to the pursuit of knowledge with an ardour worthy of the most distinguished members of the British Association; and the lectures in which Democritus explained the atomic theory to his fellow-citizens of Abdera realised, not in golden opinions only, but in golden talents, a sum hardly equalled even in America.

"To another very eminent philosopher, Anaxagoras, best known to the world as the teacher of Socrates, we are

indebted for the most important service to the atomic theory which, after its statement by Democritus, remained to be done. Anaxagoras, in fact, stated a theory which so exactly contradicts the atomic theory of Democritus, that the truth or falsehood of the one theory implies the falsehood or truth of the other. The question of the existence or non-existence of atoms cannot be presented to us this evening with greater clearness than in the alternative theories of these two philosophers.

"Take any portion of matter, say a drop of water, and observe its properties. Like every other portion of matter we have ever seen, it is divisible. Divide it in two: each portion appears to retain all the properties of the original drop, and among others that of being divisible. The parts are similar to the whole in every respect except in absolute size.

"Now go on repeating the process of division till the separate portions of water are so small that we can no longer perceive or handle them. Still we have no doubt that the sub-division might be carried further if our senses were more acute and our instruments more delicate. Thus far all are agreed, but now the question arises: Can this sub-division be repeated for ever?

"According to Democritus and the atomic school, we must answer in the negative. After a certain number of sub-divisions, the drop would be divided into a number of parts each of which is incapable of further sub-division. We should thus, in imagination, arrive at the atom, which, as its name literally signifies, cannot be cut in two. This is the atomic doctrine of Democritus, Epicurus, and Lucretius, and, I may add, of your lecturer.

"According to Anaxagoras, on the other hand, the parts into which the drop is divided are in all respects similar to the whole drop, the mere size of a body counting.

for nothing as regards the nature of its substance. Hence, if the whole drop is divisible, so are its parts down to the minutest sub-divisions, and that without end. Every part is like the whole. This is the doctrine of homogeneity. The doctrine of atoms and that of homogeneity are thus in direct contradiction.

"But we must now go on to molecules. Molecule is a modern word. It does not occur in Johnson's *Dictionary*. The ideas it embodies are those belonging to modern chemistry.

"A drop of water, to return to our former example, may be divided into a certain number, and no more, of portions similar to each other. Each of these the modern chemist calls a molecule of water. But it is by no means an atom, for it contains two different substances, oxygen and hydrogen, and by a certain process the molecule may be actually divided into two parts, one consisting of oxygen and the other of hydrogen. According to the received doctrine, in each molecule of water there are two atoms of hydrogen and one of oxygen. Whether these are or are not ultimate atoms I shall not attempt to decide."

It is precisely that question that we attack to-night.

Are atoms, the atoms hitherto known, really indivisible and ultimate atoms, or are they not?

I must preface my account, however, with the proviso that the new territory is a very recent conquest indeed. Some of it is held on very insecure tenure; the fighting, so to speak, is still going on. I do not wish to represent as established anything which is still liable to successful hostile attack, yet I shall represent what seems to me to lie in the direction of the truth, though at the same time fully admitting that hostility to some of it will be felt by some physicists, and probably by many chemists, for a long time to come; for it lies on the frontier of both

sciences, and no doubt will form a battle ground between Physics and Chemistry for a good many of the early years of the twentieth century; just as in the early years of the present century there was a long discussion and controversy as to the acceptance or rejection of the atomic theory of John Dalton. For the older statements of the atomic theory rested on philosophic speculation. It was Dalton who adduced experiments and observations in support of it in a very precise and modern form, and so revolutionized the theory of Chemistry.

It is not to be supposed for a moment that because the atomic theory generally has made its way into universal acceptance, therefore every detailed view of Dalton was correct and substantiated; clearly there must be distinctions. Where Dalton touched on Physics he was less admirable. Dalton's view of the elasticity of gases, for instance, was a statical view, based on the idea of molecules at rest, each surrounded by an elastic atmosphere and so pressing outward against each other and against the sides of the vessel, raising a piston or the lid of a vessel, after a spring jack-in-the-box fashion. This was really no explanation of elasticity at all, but it might have served as a statement of the fact of gaseous pressure had it been true: had it been true that the atoms of a gas were stationary and surrounded by infinitely expansible elastic atmospheres or repulsive forces.

But, as is well known, these things are not true; and gaseous pressure and elasticity are now explained, not statically at all, but kinetically, as due to a bombardment of free atoms, particles of matter perfectly disconnected from one another except during moments of collision, and flying in all directions at high speed, comparable to the speed of bullets. This molecular bombardment is certainly the cause of the pressure of the atmosphere.

Nevertheless, this is a detail, and the general doctrine of the existence of atoms is universally accepted. A lump of matter is as surely composed of atoms as a house is built of bricks. That is to say, matter is not continuous and homogeneous, but is discontinuous, being composed of material particles, whatever they are, and non-material spaces. There is every reason to be certain that these spaces are full of a connecting medium, full of ether; there is no really *void* space; and the question may be asked, Is this ether not in a manner itself "substance"? Is it not matter in another form? To this I should reply, and I suppose all physicists would reply,—substance it may be, matter it is not. Not matter as we know it, not matter in the sense we use the term. That term is limited, I take it, to the material bodies which are built up of atoms, it does not extend to the substance or medium, whatever it may be, occupying all the rest of space. This is only a question of nomenclature, and therefore of no great importance, but that is the sense in which the terms are, here at any rate, employed. When I say that matter is certainly atomic, I by no means mean that ether is atomic. I hold that ether is most certainly not atomic, not discontinuous; it is an absolutely continuous medium, without breaks or gaps or spaces of any kind in it,—the universal connector—permeating not only the rest of space as I have just said, but permeating also the space occupied by the atoms; the atom is a something superposed upon, not substituted for, the ether; it is most likely a definite modification of the ether, an individualisation, with a permanent existence and a faculty of locomotion which the ether alone does not possess. Matter is that which is susceptible of motion. Ether is that which is susceptible of stress. All energy appertains either to matter or to ether, and is continually passing from one to the other.

When possessed by matter the energy is called kinetic ; when possessed by ether the energy is called potential. All the activity of the material universe is due to, or represented by, or displayed in, the continual interchanges of energy from matter to ether, and back again, accompanied by its transformation from the kinetic to the potential form, and *vice versa*.

And having asserted this, which I have said at greater length elsewhere ; and adding the proviso that not by all physicists is it as yet, so far as I know, universally accepted ; I shall henceforward discard further reference to the ether in this paper, and shall deal with matter alone.

Matter consists of atoms, or molecules ; for present purposes there is no need to discriminate. Chemically it is convenient to attribute slightly different meanings to the two terms, but the distinction is of the easiest and most elementary character ; a molecule is the smallest complete and normal unit of any substance, it consists usually of two or more atoms, though it may consist of one ; and what we have to say here relates essentially to the atom.

Is the atom an ultimate atom ? Is it really and truly indivisible, is it an ultimate element or unit which cannot be split up into parts ; or does the customary postulate of its indivisibility mean no more than that we have not yet succeeded in discovering a way of decomposing it : or again, does it mean that if we did by any means break it up into fragments it would no longer be an atom of matter but something else ? Suppose for a moment that the atom was a vortex ring in ether, for instance, it could not be split up without destruction ; the splitting up would not destroy the substance of which the ring is composed, but it would destroy the motion which constituted it a ring,

which gave it individuality; it would destroy everything which entitled it to the term "matter."

If broken up it would be resolved into ordinary ether, as a smoke ring loses its individuality in common air. A common vortex ring of air or water contains within itself the seeds of its own decease; it is composed of an imperfect fluid, possessing, that is to say, viscosity, and, accordingly, its life is short; its peculiar energy being dissipated, its vortex motion declines, and as a ring it perishes.

But imagine a ring built of some perfect fluid, of some medium devoid of viscosity, as the ether is; then it may be immortal; it can neither be produced nor annihilated by known means; and it is just this property, combined with other properties of elasticity, rigidity, and the like, that led Lord Kelvin originally to his brilliant hypothesis.

In the crude form here suggested, the hypothesis has not turned out exactly true; that is to say, no one believes now that an atom is simply a vortex ring of ether, and that the rest of the ether is stagnant fluid, in which the vortex rings sail about. Any quantity of difficulties surround such a hypothesis as that. Its apparently attractive simplicity is superficial. Nevertheless it is not to be supposed that every hydro-dynamic theory of the universe is thereby denied. It is quite conceivable that a single fluid in different kinds of motion—some kinds of motion not yet imagined perhaps—may possibly be found capable of explaining all the facts of physics and chemistry; whether of biology, too, is a much larger question. But these hydro-dynamic explanations are a step beyond anything that I propose to discuss now. I have only said as much as this in order to make it clear that what we now go on to, even if it were completely true, must not be held

to replace and negative all the attempts that have been made, and that still will be made, to account for material phenomena by the motions or strains of a perfect fluid. I may as well say, however, that the motions that must be postulated will have to be of a far finer grain, the individualisation on a far smaller scale, than the original vortex atom view:—one vortex ring for each atom, and differently shaped or tangled rings for the different elemental atoms. If there is to be vorticity at all, it would appear that the whole ether must be full of it; it cannot be a simple stagnant, structureless homogeneous fluid, for that would not transmit light, would not account for optical phenomena even, still less those of static electricity and magnetism.

Unintentionally we have drifted back to the ether again, whereas I want to concentrate attention on the atom of matter. Is it indivisible, or does it consist of parts? If so, how many? Can one of them be detached from the rest of the atom and observed? Can the motion of a fraction of the atom be detected and measured? Can the atom be broken up and its constituent parts dealt with? If different kinds of atoms are broken up, will they yield fragments of different kinds, or will they all yield fragments of the same kind? Can the fragments move at a measurable speed, and can an effect of bombardment, when they are stopped, be observed? Are the fragments all alike, and can they be weighed? Are they, or can they be, charged with electricity; and, if so, what properties do they possess when so charged? Can an atom be charged, and if so, how? When a current of electricity is conveyed, by what mechanism is it transmitted? Can its phenomena be always accounted for by the transport of an electrostatic charge? What is meant by the inertia of matter? Has electricity an existence

apart from matter? What is the relation, if any, between a unit of electricity and an atom of matter?

All these questions appear likely to be capable of receiving an answer; they also appear to me to be in process of being answered now; and I would not say too much about the impossibility of an answer being given to some further questions before long, but they are in a different category to these, and involve a higher order of difficulty. The question, What is the nature of an electric charge, for instance, is not among the questions which are in process of being answered with any certainty, or with any simplicity, just yet; it will probably remain for some years yet a question and a challenge. Nor is the answer, when it comes, likely for a long time to be an easy one, such as it is possible to state in general terms and ordinary language.

The existence of an electrical charge we must assume: a charged body is a fact; whether a charge can exist without a body is doubtful, but in any case we shall assume that the properties of an electric charge are those which we know and are familiar with by experiment.

The lecturer then proceeded to exhibit some of the fundamental phenomena of an electric charge, and explained that an electric charge possessed electric inertia analogous to that of matter, so that electricity in movement possessed kinetic energy just as matter in movement possesses kinetic energy. More is known about the recently discovered property of electric inertia than of the old material inertia, and its locality is also known; it is not concentrated where the charge is, but extends throughout space wherever the lines of force extend. The energy of a moving charge or current resides in the medium round that current.

The question arises, then, whether there are two kinds of inertia. Can a charge exist without matter? Dr. Johnstone Stoney and Dr. J. Larmor have argued that it can, and have named the hypothetical isolated electric charge an "electron."

The differences between metallic and electrolytic conduction were then illustrated, and the phrase "electro-chemical equivalent" explained, and the value of the ionic charge, or charge associated with the travelling atom of matter in electrolysis, determined.

Reference was then made to the radiation phenomena recently discovered by Professor Zeeman, of Amsterdam, and to Lorentz's theory of the same, whereby the electro-chemical equivalent of the matter emitting radiation in a luminous flame can be determined and found to be about a thousand times smaller than it is in electrolysis.

The familiar phenomenon of cathode rays in Crookes' tubes was then exhibited; and when a determination of the electro-chemical equivalent in this case is made, it turns out the same as in the Zeeman effect.

Another phenomenon shown, which leads to the same result, is the discharge of electricity from a metallic surface when ultra-violet light falls upon it.

Thus it appears that, although it is a whole atom which travels in electrolysis, it is not a whole atom, but something like the $\frac{1}{1000}$ part of an atom which operates in radiation, in cathode rays, and in the discharge of electricity by ultra-violet light. The researches of Professor J. J. Thomson, which lead definitely to this conclusion on direct experimental evidence, and his method of estimating the charge and the inertia of each of the moving particles concerned in these phenomena, especially in cathode rays, were then explained; and the conclusion was arrived at that the flying particles in Crookes' tube were not atoms

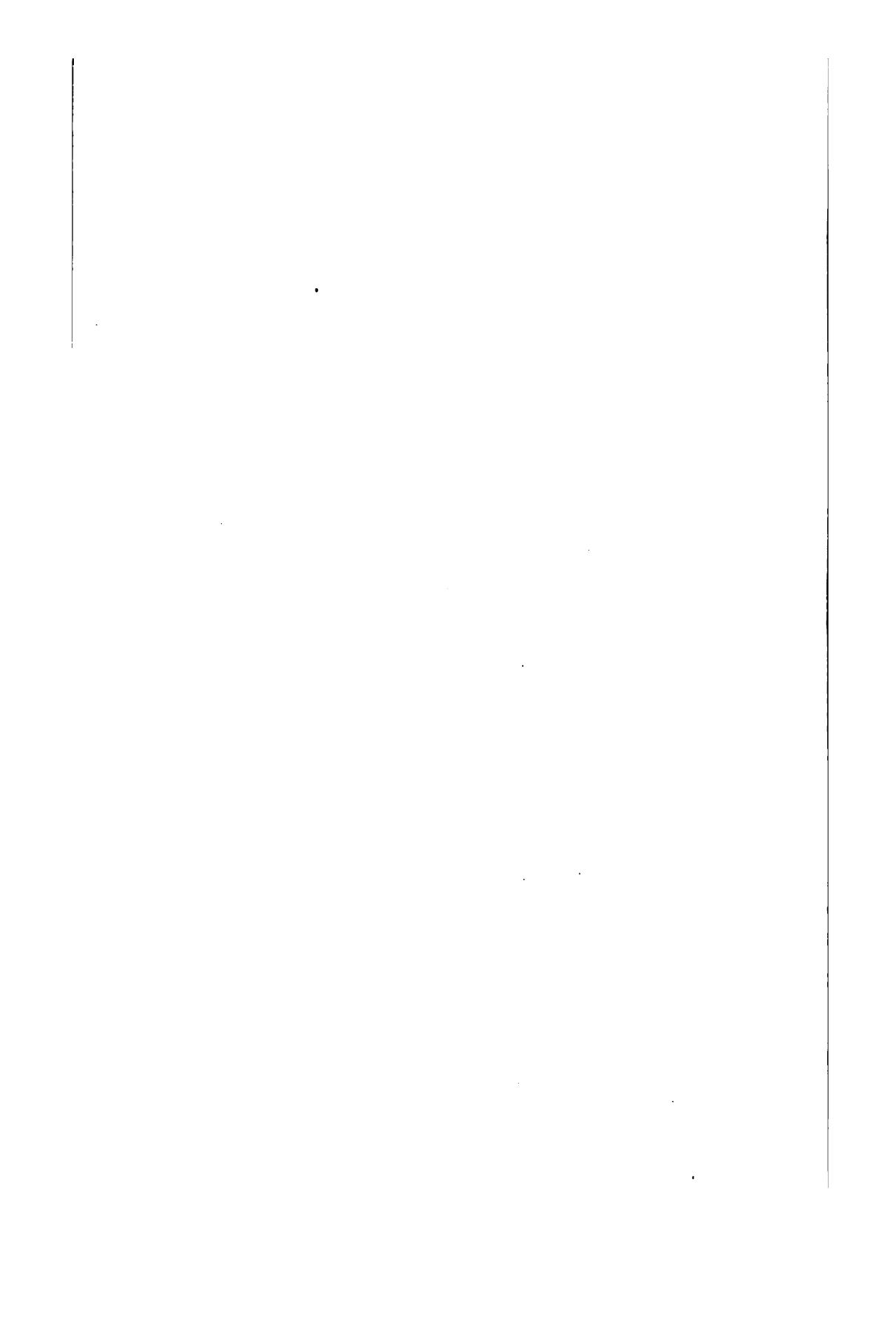
but corpuscles or fragments of atoms, that the atoms of the so-called elements are not simple but compound, every atom being built of many similar parts or corpuscles, that a hydrogen atom is composed of 500 corpuscles, a sodium atom of about 10,000, and a mercury atom of about 100,000 corpuscles; further, that the corpuscles which constitute the different atoms are all of the same kind; and that each corpuscle is electrically charged, either positively or negatively, with the ionic or electrolytic charge, which turns out to be the fundamental unit or indivisible *atom* of electricity. When a material atom has an equal number of positive and negative corpuscles it is neutral, but if it has an excess of either it is charged: a monad atom is one that has an excess of a single corpuscle, a dyad atom of two corpuscles, a triad atom of three.

There remains the question whether these corpuscles contain anything but an electric charge, whether they have any material nucleus at all, whether electric inertia is not the only inertia there is; whether, in fact, the atom of matter does not resolve itself simply into an aggregate of isolated electric charges or electrons. These questions appear likely to be answered in the affirmative.

The lecture concluded as follows:—

It is not to be supposed that I have here presented an epitome of all the evidence that can be adduced in favour of a certain view of the constitution of matter. The idea has not come upon physicists suddenly: the ground has been prepared by many indirect hints and suggestions through the last ten years. The facts that originally suggested the idea of an electron, for instance, have hardly been referred to; the evidence of spectroscopy and a study of stellar spectra has not been so much as hinted at; only the most salient and strongest features of the edifice have

been represented, and it must suffice to say that there is other evidence—some appealing more to chemists, some to astronomers, some to mathematicians—in favour of such theses as the composite structure of the atom, the building up of the elements, the unification of matter, and the possible unification of matter and electricity.



THOMAS DE QUINCEY.

BY THE REV. W. E. SIMS.

ENGLAND rode upon the crest of what has been called a "tidal wave in literature" when Her Majesty Queen Victoria ascended the throne. There were living then a host of writers, the best of whom challenge comparison with any English authors of the past, Shakespeare and Milton perhaps alone excepted. The French revolution, with its terrible sequel, the wars of Napoleon, lasted about twenty-six years. Its effect upon human thought was profound; an old and effete civilization perished in the tempest; a new world arose like a phoenix from the ashes of the old; a new world with new hopes, new aspirations, new ideals, and a new literature. England felt the impulse and responded quickly to the influence of the new spirit. There was a shaking amongst the dry bones, an awakening of intellectual energy that found expression both in poetry and prose. Many great writers had passed away in the interval between the battle of Waterloo and the Queen's accession, but a glorious company remained to welcome the beginning of the present reign. Keats, Byron, Shelley, Scott, Lamb and Coleridge had crossed the bar, but Queen Victoria was called to rule a nation that included among her sons Wordsworth, Southey, Campbell, Sidney Smith, Thomas Moore, Samuel Rogers, Thomas de Quincey, Landor, Macaulay, Carlyle, Newman, Keble, Maurice, Martineau, Tennyson, Brown-

ing, Dickens, Thackeray, and many others of hardly inferior reputation; and among her daughters Joanna Baillie, Miss Edgeworth, Mary Somerville, Harriet Martineau, Elizabeth Barrett, and the sisters Bronté.

One of the most original and extraordinary of these writers was Thomas de Quincey, who was born at Manchester, in 1785, and therefore has an especial claim upon the sympathies of a Lancastrian audience. He claimed descent from an ancient and honourable family, an alleged ancestor, Richard de Quincey, was a companion of William the Conqueror; and others were splendid in their day—Earls of Winchester—mildly interesting to the genealogist. De Quincey's immediate progenitors, however, aspired to no particular distinction. He says:—

My father was a merchant, *not* in the sense of Scotland, where it means a retail dealer, one, for instance, who sells groceries in a cellar, but in the English sense, a sense vigorously exclusive; that is, he was engaged in foreign commerce, and no other; therefore, in wholesale commerce, and no other; which last limitation of the idea is important, because it brings him within the benefit of Cicero's descending distinction, as one who ought to be despised certainly, but *not too* intensely to be despised even by a Roman Senator. He, this *imperfectly despicable* man, died at an early age . . . leaving to his family, then consisting of a wife and six children, an unburdened estate producing exactly £1600 a year. We, the children of the house, stood in fact upon the very happiest tier in the social scaffolding for all good influences. The prayer of Agar, "Give me neither poverty nor riches," was realised for us. That blessing we had, being neither too high nor too low. High enough we were to see models of good manners, of self respect and of simple dignity, *obscure* enough to be left in the sweetest of solitudes, amply furnished with all the *nobler* benefits of wealth, with extra means of health, of intellectual culture, and of elegant enjoyment; on the other hand we knew nothing of social distinctions. Not depressed by the consciousness of privations too sordid, nor tempted into restlessness by the consciousness of privileges too aspiring, we had no motives for shame, we had none for pride.

Materials for the biographer of de Quincey are abundant, he has left us a volume of autobiographical sketches, another volume of confessions, and a great deal of personal matter scattered up and down his recollections of eminent contemporaries. There are, besides, innumerable notices of de Quincey in the writings of his literary friends which help us to correct impressions produced by the somewhat imaginative medium through which he permits us to study the circumstances of his life. And these materials are readily accessible in Dr. Japp's *Life of de Quincey*, in Professor Masson's smaller work in the *English Men of Letters* series, and in James Hogg's interesting collection of souvenirs and anecdotes, entitled *De Quincey and his Friends*. The lives of most men of letters are uneventful, their chief chronological landmarks the dates of the publication of their books, but the career of de Quincey, an erratic person full of astonishing vagaries and eccentricities, furnishes an exception to the monotonous rule. His earliest years were passed at Greenhays, then a pretty rural place in the vicinity of Cottonopolis, but long since covered by a network of mean streets. He was a diminutive child of a dreamy nature, and the picture he gives of his childhood—no doubt highly coloured by the reflections of later years—is sufficiently remarkable. When he was six years old he lost an elder sister, Elizabeth, to whom he was especially devoted, and the sad event made an impression upon his mind so profound that it affected his whole existence; when he died, 67 years later, his last words were "sister, sister, sister!" He describes his visit to the death chamber. "I stood checked for a moment; awe, not fear, fell upon me, and whilst I stood a solemn wind began to blow. It was a wind that might have swept the fields of mortality for a thousand years." With equal pathos he describes the funeral, the rattle of the gravel on

the coffin at the words, “earth to earth, ashes to ashes, dust to dust,” and the awful loneliness that followed. “Deep is the solitude of millions who, with hearts welling forth love, have none to love them. Deep is the solitude of those who, under secret grief, have none to pity them. Deep is the solitude of those who, fighting with doubt or darkness, have none to counsel them. But deeper than the deepest of these solitudes is that which broods over childhood under the passion of sorrow.” Soon he passed out of the “afflictions of childhood” into the “world of strife.” His elder brother, William, “my horrid, pugilistic brother,” came home from boarding school, and the two lads were sent to a tutor living about two miles from Greenhays. On the road they had to pass a factory, and William, a courageous youth with a talent for mischief, became embroiled with the factory lads—there were daily skirmishes, battles with stones and sometimes with fists—this was a source of real enjoyment to the elder boy, but the younger passed his days in agonies of apprehension. “Once having begun it followed, naturally, that the war should deepen in bitterness. Wounds that wrote memorials in the flesh, insults that rankled in the heart—these were not features of the case likely to be forgotten by our enemies, and far less by my fiery brother—I, for my part, entered not into any of the passions that war may be supposed to kindle, except only the chronic passion of anxiety.”

The war was terminated by the removal of the de Quinceys to Bath. Mrs. de Quincey, after the death of her husband, grew tired of Greenhays, the house and grounds were sold, the establishment broken up, the war-like William sent to London, where shortly afterwards he died, and Thomas “entered the arena of a great public school, the Grammar School of Bath.” Here immediately

he became famous as a precocious Latin scholar, and at eleven years of age his verses were held up as models for the imitation of lads of eighteen on the verge of transit to Oxford. This made matters unpleasant for him—greatness has its penalties. "If you are superior to another," says Schopenhauer, "never let him know it." One burly youth ordered him to write worse verses under pain of annihilation. "I was to write worse than my own standard, which, by his account of my verses, must have been difficult, and I was to write worse than himself, which might be impossible!" He paid unusual attention to his next copy of verses, "double-shotted his guns," and reaped from the master double applause. The annihilator paid his respects to him again. "You little devil, do you call this writing your worst?" No!" replied de Quincey, "I call it writing my best." Unfortunately, after two years, his career at this school was cut short by an accident that invalidated him for a time, and on his recovery he was sent to a private school at Wingfield, "of which the chief recommendation lay in the religious character of the master." This was a matter of supreme importance in the opinion of Mrs. de Quincey, who was a friend of the once celebrated Hannah More, and shared that lady's religious sentiments. She was shocked to hear of the praise so lavishly bestowed upon her son at the Bath Grammar School, and resolved to remove him from the contaminating influences of flattery. His sojourn at Wingfield came to an end in a year upon receipt of an invitation to spend a few months in company with an aristocratic friend of the family, young Lord Westport, a grandson of the Marquis of Sligo. He joined his companion at Eton, saw Windsor, had a characteristic interview with King George III—amusingly described in the autobiography—and paid a short visit to London. He has

left upon record the impression the vast city made upon his imagination. “It was a heavenly day in May . . . when I first beheld and first entered this mighty wilderness, the city—No! not the city, but the nation of London—where nobody sees you, nobody hears you, nobody regards you, you do not even regard yourself—in fact, how should you—at the moment of discovering your own total unimportance in the sum of things, a poor shivering unit in the aggregate of human life.”

From London the two young friends proceeded to Ireland, and de Quincey’s account of his adventures there are mixed up with characteristic digressions on Irish history and politics; meanwhile, he was enjoying himself at the seat of Lord Westport’s father, and coaching the son in classics. Returning to England he stayed for some time at Lord Carbery’s house at Laxton, teaching Lady Carbery the Greek Testament, and revelling in the large and valuable library. He says:—

Now at Laxton the books had been so judiciously brought together, so many hooks and eyes connected them, that the whole library formed what one might call a series of strata, naturally allied, through which you might quarry your way consecutively for many months. On rainy days, and often enough one had occasion to say through rainy weeks, what a delightful resource did this library prove to both of us! And one day it occurred to us that, whereas the stables and the library were both jewels of attraction, the latter had been by much the least costly. Pretty often I have found, when any opening has existed for making the computation, that in a library containing a fair proportion of books illustrated with plates, about ten shillings a volume might be taken as expressing upon a sufficiently large number of volumes, small and great, the fair average cost of the whole. On this basis the library at Laxton would have cost less than £9,000; on the other hand, 35 horses (hunters, racers, roadsters, carriage horses, etc.) might have cost about £8,000, or a little more. But the library entailed no permanent cost beyond the annual loss of interest; the books did not eat and required no aid

from veterinary surgeons; whereas, for the horses, not only such ministrations were intermittently required, but a costly permanent establishment of grooms and helpers.

De Quincey was now 15 years old, and it became necessary that he should return to school until he was old enough to be sent to Oxford, his patrimonial inheritance amounted to £150 per annum, the Grammar School at Manchester possessed some exhibitions to Brasenose College, Oxford, worth £40 or £50 per annum for seven years. Mrs. de Quincey and his guardians determined, much against the boy's will, that he should go to Manchester and study for one of these exhibitions. He was to remain there three years, and then proceed to the university. There was nothing in the arrangement that would have been unsuitable for an ordinary boy, and de Quincey's mother and guardians, failing to recognise the fact that he was not an ordinary boy, allowed themselves to be guided by what seemed to them commonsense principles. But de Quincey's recent experiences in society made the prospect of a return to the drudgery of school intolerable, and his extraordinary acquirements, already far in advance of the standard required for entrance at the university, filled him with intolerance of the companionship of mere schoolboys. Speaking of his "intellectual expansion," he says: "No longer did it seem to move upon the hour-hand, whose advance, though certain, is yet a pure matter of inference, but upon the seconds-hand which visibly comes on at a trotting pace."

Manchester Grammar School realized his gloomy anticipations, and in spite of alleviating circumstances, the visit of Lady Carbery to Manchester, and an acquaintance he had formed with a club of *literati* in Liverpool, which included Roscoe and Dr. Currie among its members, he determined to leave, and his guardians turning a deaf

ear to his solicitations, he borrowed £10 from Lady Carbery, and walked home to Chester where his mother was then residing. That lady was naturally scandalized at his flight, but her brother, Colonel Penson, taking a kindlier view of the escapade, it was arranged that de Quincey should receive an allowance of a guinea a week and follow his bent. He spent the next five months in rambling about Wales, half tourist, half vagrant, sometimes indulging in the extravagance of a table-d'hôte which dissipated half his weekly allowance, but generally seeking the simple accommodation furnished by the cottages of the peasantry, and occasionally reduced to sleeping under a hedge and breakfasting off wild berries. At least he was free from Manchester and its odious associations. "No huge Babylonian centres of commerce towered into the clouds on these sweet sylvan routes, or fever-stricken armies of horses and flying chariots tormented the echoes in these mountain recesses," but he pined for books and literary society, and at length determined to cut off all communication with home, journey to London, and raise upon his expectations sufficient money to maintain him until his majority. But like many otherwise well-informed persons, he knew really nothing about the world, and in London he was soon reduced to the direst straits. He lived parsimoniously in mean lodgings until he had broken into his last guinea, and then begged permission to sleep in the house of a low attorney named Brunell, the factotum of a Jew from whom he hoped to borrow money. The only other occupant of the premises after business hours was a poor little girl, a hunger-bitten waif like himself, and these strange companions, the friendless child and the wandering boy—he was barely eighteen—passed an indefinite number of nights together in the lonely house. "We lay upon the floor with a bundle of law papers for a pillow,

but with no other covering than a large horseman's cloak; afterwards, however, we discovered in a garret an old sofa-cover, a small piece of rug, and some fragments of other articles which added a little to our comfort."

Misery makes strange bedfellows! One other friend he made in London, a member of that pariah class, the product of a heartless civilization, a poor girl of sixteen summers, if age can be measured by summers that knew no sunshine, and this unhappy creature, not lost to every virtue, pitied the forlorn youth. They wandered together up and down "stony-hearted Oxford Street," a strangely assorted couple, with absolutely no suspicion of blame, poor guilty-innocent girl, poor foolish-innocent boy, the one shunned, the other ignored; and once when he was fainting from starvation and exhaustion she ran and brought him a glass of port wine, purchased with her last sixpence, saving his life as he always affirmed—strangest of good Samaritans, as it were, casting her all into the treasury, doing what she could. Few passages in de Quincey's writings are more affecting than those in which he speaks of this unfortunate girl—Ann of Oxford Street—his natural eloquence fired by gratitude, his stately prose tremulous with sadness as he speculates upon her probable after fate.

Perishing gloomily, spurred by contumely,
Cold inhumanity, burning insanity,
Into her rest.

At a later period he exhausted every means in the attempt to trace her whereabouts, but failing completely, consoled himself with the hope that a cough she suffered from pointed to the prospect of an early and merciful grave.

It was owing to the gastric disorders occasioned by de Quincey's miseries in London that he became an

opium eater, and no doubt, as Professor Masson suggests, "that eccentricity which was to be a life-long characteristic, and even that form of eccentricity which was to be peculiarly his in after life, a constant shy timorousness, a perpetual looking backward over his shoulder for some terrible danger that he had escaped, but that was still dogging him, seems to have been first developed in those days of his strange London experiences in his eighteenth year." After a time, by some unexplained means, he was discovered by his friends, and went back to Chester, where arrangements were made for him to complete his education at Worcester College, Oxford, here it might have been imagined that a man of his attainments would have made a considerable reputation, but he seems to have neglected the ordinary curriculum and made no mark at all. "He was generally known as a quiet and studious man, remarkable for his rare conversational powers and extraordinary stock of information upon every subject," but he was not the kind of student appreciated by the authorities, and after spending several years at Oxford learning Hebrew, German, studying Kantian metaphysics, English literature and other subjects not indispensably necessary, he astonished the examiners by the brilliancy of his paper work in the final examination, but shirking the *riva voce* in consequence of constitutional timidity, left the university without taking a degree. The bar next claimed his attention, and he began reading law, but it is hardly necessary to say that he never became a barrister. Often the victim of circumstances, he was yet more frequently the victim of his own constitutional incapacity for the ordinary routine of life.

It was unfortunate that his mother, by removing from Manchester to Bath, deprived him of a tutor under whom he was making phenomenal progress in his studies. Even

more unfortunate was the arrangement that checked a promising career after two years at the Grammar School of Bath, and sent him to waste time for twelve months in an inferior academy at Winkfield. Then came the agreeable but singularly inopportune year of travel and desultory private reading with his friends at Westport and Laxton. At Manchester he seemed to be on the right road for eighteen months, but deliberately abandoned his prospect of a scholarship at Brasenose by running away. For about a year he lived the life of a tramp among the Welsh mountains, and an outcast upon the streets of London, and then proceeded to Oxford, where five years spent in multifarious studies, the greater part of which were outside the regular course prescribed by the authorities, came to an abrupt end in flight from the terrors of an examination. It is idle to speculate upon what might have been de Quincey's position in the world had ordinary firmness and judgment controlled the course of his education, but in any attempt to arrive at a fair estimate of his powers and achievements, the broken, irregular and erratic career he led while nominally under the care of guardians, who lamentably failed in their duty, must be taken into account.

Neither in promise nor performance can he be fairly compared with other men, his characteristics and destiny are probably unique. He left Oxford apparently in good financial circumstances, having succeeded to his inheritance, and some time after, renting a cottage in the Lake district to be near Wordsworth and other members of the so-called Lake School, he surrounded himself with thousands of books, and led the life of a private gentleman of independent means, somewhat eccentric habits and scholarly tastes. Here he lived for seven years as a studious bachelor, and when he married it continued to be

for twenty years more the home of his wife and children. And here he became the slave of that vicious indulgence responsible mainly for the ruin of his life and the foundation of his reputation. After the manner of his friend Coleridge, also an opium eater, de Quincey projected important literary schemes that, like *Castles in Spain*, were imposing architectural triumphs when seen through the mist of imagination. One was to be a great philosophical work, another actually begun, but never finished, was entitled *Prolegomena to all Future Systems of Political Economy*. It is conceivable that he might have attained exalted rank as a thinker, but nature's mysterious law of compensation apparently refused to associate in one personality the learning and genius that de Quincey undoubtedly possessed with the practical power necessary for its complete presentation. It is probable that, but for the pressure of poverty, which roused him at length from his dreams and forced him into literary activity, no fruit whatever would have been produced as the result of his omnivorous reading and years of indefatigable study. But the wolf was at the door, his patrimony exhausted, children growing up around him, debts accumulating, and at the age of 36 he drifted into literature through the only portal immediately available—the pages of popular magazines. For nearly 40 years he contributed papers upon almost every conceivable subject to the periodicals of the day, and a collection of the best of these, in fourteen volumes, constitutes the works of Thomas de Quincey.

Of late years a considerable change has taken place in the bill of fare provided by journals of this class, their contents are less purely literary, the more expensive kind are full of matter intelligibly formulated and intelligibly expressed, but it is not the species of matter that ultimately finds its way to the permanent library. Imagine

that an essay of Charles Lamb's found its way by some accident into an ordinary magazine, how out of place it would appear in company with articles on the South African question, on Irish land reform, on Hydrophobia, Genesis, Steam-tramways, Sugar bounties, American tariff, and the National debt! It would look as whimsical as an Elizabethan courtier in slashed doublet and silken hose trying to cross the road from the Mansion House to the Bank of England. Nor would the productions of a Lamb or de Quincey be much more at home in the cheaper kind of periodicals, with their snippings, cuttings, pastings, odds and ends, fragments, tit-bits, scraps, snicks, snacks, filings, scrapings, maxims, jokes, anecdotes, paragraphs and personalities, the Turkish dinner—bewildering, chaotic, indigestible—offered as mental diet to the desultory reader of to-day.

For the magazine of fifty years ago de Quincey was an ideal contributor. Although not a scholar in the very limited technical sense of the term as applied to men engaged in the minutiae of classical criticism, he possessed a thorough knowledge of Greek and Latin literature, and an acquaintance hardly inferior with most of the best European authors. His reading was omnivorous, prodigious. If not born in a library, like the younger Disraeli, he practically lived in one, and incidentally betrays in his notes and digressions a learning astonishing in its depth and compass. No doubt there have been men more learned than he was. We have had Bentleys, Porsons, and Parrs, but their writings can only appeal to a select few. No doubt there have been men as widely read as he was, Macaulays and Emersons, but they were not scholars in the sense that de Quincey was a scholar. Professor Masson is of opinion that a month given to de Quincey's writings, at the rate of

half-a-volume a day, would "stretch one's mind!" and there can hardly be any doubt that the athletic person who undertook this exercise would smile at any intellectual five-barred gate for some time afterwards, for here we have the net result of a life time spent among books, the quintessence of libraries, distillations of years of reading, crystallizations of accumulated hours of thought, a mental menu sufficiently varied for the most exacting literary epicure. Here are some of the titles, a dozen picked out quite at random from a couple of hundred or more:—*Joan of Arc, Modern Superstitions, The Revolt of the Tartars, Judas Iscariot, John Milton, Greece under the Romans, National Temperance Movements, The Theban Sphinx, California, Historico-critical Enquiry into the origin of the Rosicrucians, The Art of Conversation, The Logic of Political Economy.* Into the consideration of these varied subjects he poured the wealth of an inexhaustible memory, stored with a readily accessible knowledge of "the best that has been thought and said in the world." But he was a great deal more than an universal student with a capacity for prolific production, he possessed a marvellous imagination, the contemplation of which has been dangerous to admiring imitators who supposed the secret could be found in a bottle of laudanum. He built cloud-capped towers and gorgeous palaces, he saw visions, he dreamed dreams; in the miserable Patmos of cheap London lodgings the seer evolved his secular apocalypse. Indulgence in opium might qualify an average mortal for success in realizing de Quincey's gastric sufferings, but to rival his imaginative power would pre-suppose the possession of de Quincey's brain.

In addition to learning and imagination these multifarious writings contain a peculiar vein of humour which invades his treatment even of gruesome subjects, as in the

essay on *Murder Considered as one of the Fine Arts!* but whether learned, imaginative, or humorous, whatever might be the material, it is produced with all the resources of an accomplished master of style. The principal defect of de Quincey, according to the critics, is an inveterate tendency to digression. It is impossible to say by what route he will take us between any two given points; he turns continually off the main road, allured by tempting by-ways, interrupts the orderly progress of his ideas to discuss subsidiary topics, the derivation of a word, the origin of an allusion, the source of a quotation; he glances at sidelights as they shine across the path, and incorporates into his text matter usually relegated to footnotes; he adopts the principle of the military strategist, who leaves no cover unexplored and no fortress in the enemy's hands upon the line of march; he is not an allusive writer, with a belief in the reader's intelligence, he insists upon exhausting the subject, and occasionally the reader's patience. It has been also alleged as a defect of de Quincey's, that there is no serious moral purpose running through his books, but I am not sure that this is a serious blemish. He was a writer to charm rather than to inspire; he did not live to reform anything, to make "the crooked paths straight and the rough places plain;" he had no gospel to proclaim, no message to deliver; he was not a prophet like the seer of Chelsea, not a preacher of righteousness like Kingsley, not a social reformer like Ruskin, not a slayer of abuses like Dickens; he struck no rock in Horeb for living waters to refresh wearied souls, he held up no law-giver's hands while God's battles were fought and won, but he belonged to a class of writers pure, lofty, elevating, and refined, who add very considerably to the sum of human culture and enjoyment.

No paper on de Quincey would be honest, much less

complete, if it left out of sight the hideous spectre that haunted his footsteps in life, the deadly self-indulgence that warped and twisted, bowed and distorted his wonderful mind. The use of opium was at first perhaps a necessity, then a pleasure, but at last an agony stinging like an adder. It grew upon him until his daily allowance was 320 grains of solid opium, or 8,000 drops of laudanum, about seven wineglassfuls! When, in 1816, he married Margaret Simpson, the daughter of a small farmer, he made a desperate attempt to break the chain that bound him, and for a year almost succeeded, but the vicious habit gradually re-asserted its mastery. His will became paralysed; he suffered incessant nightmare. Life became an intolerable curse, a shuddering horror. His dreams, as described by himself, alternately delight and appal the imagination. He revelled at times amid scenes of unimaginable splendour, at other times endured the tortures of a Dantean hell. But he never ceased to struggle against the demon that possessed him, and it is gratifying to know that, although the snake was never killed, it was severely scotched. An opium-eater he continued to the end of his life, but his indulgence became more moderate as years advanced. To this terrible habit must be attributed in part the fragmentary nature of his literary works, consisting of perhaps two hundred papers contributed to periodicals. Upon this miscellaneous collection his fame rests. When we attempt to sum up the life of de Quincey, to estimate fairly his gigantic powers of mind, to balance these with his singular and ruinous infirmity of will, the intellectual success that might have been so noble, the moral failure that, like "a canker eating at the root turned the fair flowers black," we need a double portion of that charity which "thinketh no evil," but is "long-suffering and kind." We might think, but for our

knowledge of his life, that a couple of hundred reviews and magazine articles was a poor out-put for a great scholar who had nothing to do but to read and write, who enjoyed a long life of unlimited leisure, free from business cares or professional duties.

But what a broken life it was! Can we say that he ever received what is called a good education? A year here, a year there, two years elsewhere, and these not continuous but interrupted by months of wandering and years of inactivity. What a broken life it was! No strong hand to guide the steps in early youth, no strong hand to grasp the reins in manhood. Broken, alas! by indulgence in the most baneful of habits! long years obscured or partially obscured by the deadly mists of opium. And yet withal was the result so very small? What a scholar he was! His learning shines in every page, there seems to be nothing he did not know, not a province his keen eye had not explored, and he made this scholarship available for the use of those less gifted than himself. There are hundreds of learned sponges in our colleges and elsewhere, if we could only squeeze them! Meanwhile their principal faculty seems a talent for unlimited absorption. The world is no wiser, no better, no happier for their existence—intellectual misers who hoard their glittering treasures of knowledge and gloat over them only in secret! Mental camels of almost infinite storage capacity! Walking encyclopædias with locked covers! Knowledge is a grand thing only when in some way it is used for the benefit of mankind, otherwise its acquisition is hardly more than a refined form of selfish indulgence. Hidden Golcondas and Potosis are of no value to man. Lordly parks with high enclosing walls are no benefit to the people. De Quincey displayed his wares, helped on the education of the race, but he was no pedant, he had a fine creative faculty, he

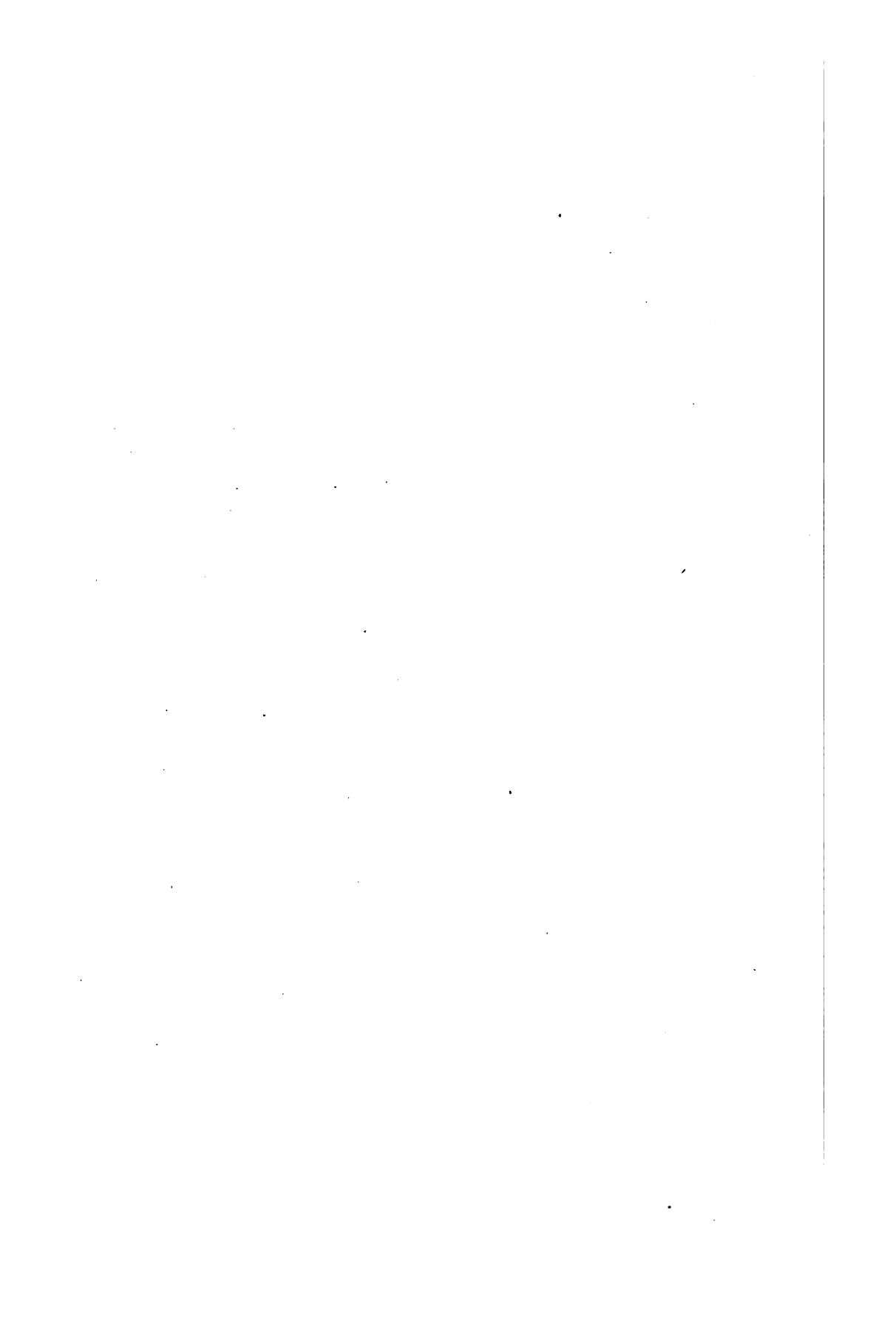
brought out of his treasures things old it is true ; he brought out also things that were new ; he touched the dry bones of buried lore with his magic wand and they sprang into life, he breathed upon the slain things of other days, and "lo ! they stood upon their feet an exceeding great army." And every subject he dealt with he clothed in matchless language. When you begin to read him, his style seems so pellucid, so clear, you think it easy to write like that. Try ! Try to invest the details of a subject with de Quincey's charm of style, and your ideas of simplicity receive immediate correction. Not that he always appears simple, passages abound that are full of sublimity, they roll like the rhythm of organ music, they march in stately order like a Roman legion. He has none of the rugged picturesqueness of a Carlyle, we think not while reading his pages of rocky glens and wild upland moors and sea-girt towering cliffs, beetling crags and frowning precipices. He never smites the white-hot metal upon the anvil until the eyes are dazzled with flying sparks and blinded by glowing heat. There is nothing stormy and tempestuous about him. He never could have written such passages as Teufelsdröckh's View of the City by Night; or the March of the Women on Versailles. He has none of the glittering brilliancy that characterized Macaulay, the short breathless living sentences, the rapid energetic step, the constant allusiveness, the continual reference to names, places and persons, the vast wealth of historical detail, the summary decisiveness of judgment, the piled-up crystallisations of sparkling periods. Nor has he, unless very rarely, the wonderful richness of a Ruskin—richness as of cloth of gold, or fine Indian needlework. He is not a seer interpreting nature and art in language that suggests by its tropical luxuriance the glories of some primæval forest where fire-flies glitter amid a wealth of floral magnificence.

But he builds us the stately cathedral, with its long vistas of columned aisles, its lofty pointed arches, its dim recesses, its mellow lights, its massive towers, its heaven-piercing spires. He rears, stone upon stone, the mighty temple with its pinnacles, minarets, and domes where the voice is hushed with awe and the spirit humbled by a sense of vastness. And every portion of the work seen in detail is complete, there is not a sentence that could be safely altered. He does not depend upon broad effects and rough suggestiveness, every inch of the elaborated tracery is smoothed and polished with a perfect finish. Oh the pity of it ! that powers such as de Quincey's should have been shattered by a pitiful indulgence. Surely nature is strangely capricious, endowing men like de Quincey and Coleridge with regal minds but feeble wills. They stand, these friends and companions, monuments of shattered grandeur like the Parthenon at Athens, like the Coliseum at Rome—majestic mutilations, sublime ruins.

The personal appearance of de Quincey was singular, he had a finely shaped head, a curious wizened face, dim dreamy eyes, except when excited by conversation, a tiny frame, little more than five feet in height—a “wee intellectual wizard.” It must have been a strange sight to see him walking with Christopher North, the two were nearly inseparable while he lived in the Lake country. North, gigantic, massive, athletic, the frame of a gladiator, the head of a lion—and de Quincey, diminutive like a child stricken in years. He was the shyest and most absent-minded of men, would do anything rather than face a dinner party, fled precipitately if he thought anyone was looking at him, he loved to walk at night, and used to traverse the hills and valleys of the Lake district and the environs of Edinburgh, where his last years were spent, when all sensible people were in bed asleep. Sometimes

on these nocturnal expeditions he would carry a small lantern, but as a rule, the night to him was as the day. Sometimes, it is said he did not trouble to return home for rest, but curled himself up to sleep at any convenient place beneath the stars. His daughter admitted that he was a provoking person to live with; to say nothing of his irregularities with respect to opium, or his inconvenient habit of nocturnal rambling, he was the most untidy of men, he littered every room in the house with papers, periodicals and books; he wrote letters and lost them amid rubbish heaps of literary memoranda; he seldom knew the precise situation of any of his belongings, leaving them here and there, and then forgetting where. A story is told how on one occasion he was taking two boxes of papers to a friend's house, but the man who carried them having some dispute with him on the way, abruptly threw up his commission and left the trunks in their owner's care. Unable to manage the load himself, he left his precious cargo at a bookseller's shop, and when he reached home, had quite forgotten the name of the custodian and the street in which he lived! Happily, however, by the assistance of his friends, he ultimately managed to recover his abandoned treasure. He was a serious trouble to his publishers—always late, always procrastinating. It was with the greatest difficulty that he ultimately achieved the task of collecting his scattered writings for the complete edition. It engaged him several years, and even then the work was not fully accomplished, additional papers frequently come to light, and there must be many a contribution of his lurking in dusty corners where the mummies of literature, the volumes of defunct magazines, lie waiting for the coming of the Coccigrues. He died at Lasswade in 1859, the same year as Macaulay, and lies in the West Churchyard at Edinburgh beside his wife, where a simple tablet

on the wall is the only memorial of him. But he needs no monument of bronze or marble to keep alive the recollection of his name. While the English language lasts in its present form he will hardly be forgotten. Generally popular, or widely appreciated perhaps he will never be, probably his audience will always be a comparatively select few, but as culture widens and lingering wisdom comes, and the temporary fashion of the fleeting hour fades and a truer taste is formed, and the contemporary sandhills of literary reputation melt away under the surf of time, whatsoever things written in books that are pure and strong, wise and gracious, will become more and more appreciated, and among them it is not overbold to prophesy will be many an essay of the "intellectual wizard" who charmed and delighted our fathers when the century was young.



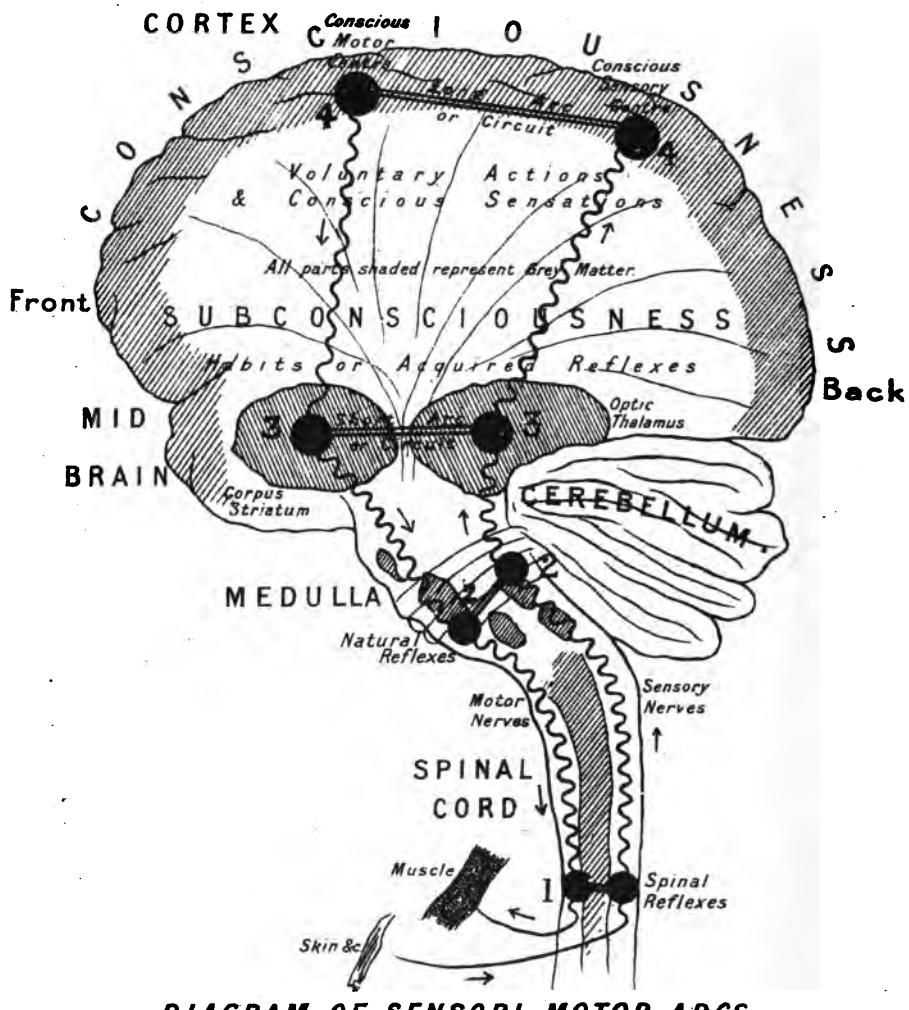


DIAGRAM OF SENSORI-MOTOR ARCS.

(Schofield.)

THE SUB-CONSCIOUS MIND: ITS NORMAL AND SUPRA-NORMAL POWERS.

By JOHN MURRAY MOORE, M.D., F.R.G.S., &c.

THE constitution of the complex being called man, whether viewed analytically or comprehensively, whether regarded from the different standpoints of the theologian, the psychologist, the physiologist, or the physician, affords to all thinkers and seekers after knowledge a life-long study of the greatest possible interest.

The nearest approach to an accurate and comprehensive definition of man's nature—a definition which all Biblical scholars accept, and which is being confirmed by the most recent discoveries of psychology—is that of St. Paul (1 Thess. v, 23), namely, spirit (*πνεῦμα*), soul (*ψυχή*), and body (*σῶμα*).

Man is thus a trinity in unity. His spirit is a spark of the Divine Essence—"the light that lighteth every man;" his soul, mind, or life (all of which are connoted by the Greek *ψυχή* in the N. T.) is purely *human*, yet *linked* to the intelligence of the higher animals; and his body is a new creation, specially designed by the Creator for the habitation of the first two elements—the *perfected form* of a very long series of evolutionary types, ascending from a globule of protoplasmic jelly up to the anthropoid apes. Here, however, I part company with Darwin, Huxley, and Wallace, for there is a vast gap, not yet filled up or bridged by the fossil man of Cro-Magnon, or the "*Pithecanthropus erectus*," between the *homo* and the highest *quadrumana*. The human mind is certainly not

the product of cerebral evolution. Furthermore, his $\pi\nu\varepsilon\nu\mu\alpha$, or immortal spirit, is a distinctive endowment. Lastly, it is revealed to us in the Scriptures that the dignity of man has been conferred upon him by God, who created him in His own image, placed him on a habitable earth, in rank "a little lower than the angels;" and gave him "dominion over all the works of His hands."

The various theories propounded by modern philosophers, such as Professor W. James, of Harvard, Mr. Leonard Hall, and others, with a view to avoid the miracle which is postulated by the creation of each human spirit-soul, are merely revivals of Platonic or Pythagorean hypotheses, long since refuted by both science and revelation, though still beloved by poets and poetical writers. Prof. James, in his *Human Immortality*, conceives that a portion of the cosmic soul is implanted in each child at birth, and quotes Emerson's remark—"We lie in the lap of immense intelligence, which makes us receivers of its truth, and organs of its activity." Mr. Hall, in his recent book "*Man, the Microcosm,*" holds that the *ego* or personality of a man is compounded of an immense number of individual monads, each possessing a mind or soul of its own—even "involuntary" actions being guided by consciousness—and a work of its own to perform for the corporate good.

The general subject of consciousness having been ably treated by our esteemed President, the Rev. E. N. Hoare, in his valuable paper read to this Society in March, 1897, this paper will be limited to that portion or department of human consciousness termed by Dr. A. T. Schofield, Beneke, Hartmann, and other authors, the "unconscious mind," but far better named "the sub-conscious mind" or "sub-consciousness." For the brain is always, during life, receptive to impressions, therefore "unconsciousness"

should be used only of those morbid states of the central nervous organs to which it is strictly applied in medicine. Now human consciousness exists in two states or conditions :—(1) Full, active, or primary consciousness, in which a man is wideawake, alert, attentive, and fully master of his own will and reasoning powers ; and (2) Passive, secondary, or sub-consciousness, in which impressions are received by the senses, and stored up by the brain, without arousing attention, or putting the will into conscious exercise. A more comprehensive analysis of consciousness is that of Professor Baldwin, who, in his *Handbook of Psychology*, draws a diagram in circles (the area of which represents the whole mind-capacity), the outer circle being the unconscious, next the sub-conscious, then passive consciousness, then active consciousness or perception, and, innermost of all, apperception. And there may be even a supra-consciousness, wherein impressions, not tangible to the senses in their normal state, are received and stored up. These regions of higher soul and spirit-life, of which we are only occasionally conscious, link the mind on to the eternal as surely as our sub-consciousness is attached to the temporary body. "We may call the supra-conscious mind," writes Dr. Schofield, "the sphere of the spirit-life, the sub-conscious mind the sphere of the body life, and the conscious mind the middle region where both meet."

Let us take three familiar illustrations of the workings of our sub-consciousness :—1. A friend meets me in the street, and asks me for a name and address once perfectly familiar to me. By no effort of recollection can I possibly, just then, recall them. But they are, I feel certain, stored up somewhere in memory. A few hours or days afterwards some trivial link of circumstance causes them to flash into my mind.

2. One has lost a beloved relative, and for a long time grief occupies the whole conscious mind. But the busy activities of life, and Time the great Consoler, gradually soothe the mourner, until his sorrow ceases to be perceptible even to himself. But the anniversary of the death comes round, or a book is opened wherein the dead hand had traced his name, or a mutual friend in conversation recalls the happy days of yore, when, from his sub-conscious mind, gushes forth the torrent of grief, and he suffers again.

3. A man walking in the crowded streets of a city may be so engrossed in thought as neither to recognise a passing friend, nor to observe the vehicles, shops, &c. Yet he goes on his way without jostling fellow-travellers, or colliding with the lamp-posts. In this case his full consciousness is occupied with some absorbing mental process, while his sub-consciousness regulates his movements in safety. As our active consciousness can only grasp one idea quite clearly at any one instant of time, it follows that thousands of other ideas and impressions, both objective and subjective, are received on the "ever-sensitive photographic plate" of our brain, and sink into our passive consciousness, thus enriching and extending our knowledge. In the present condensation of my original paper, I can but repeat some of the considerations, facts, and inferences I therein adduced to prove the importance of the sub-conscious mind in the development of infancy and the education of children; in the formation of habit; in the phenomena of memory, sleep, and hypnotism; to show its anatomical seat by a diagram; and to add a few remarks upon psychical endowments. It is intensely interesting to students of human nature to observe, as Professor Baldwin has so accurately observed, the dawning faculties of an infant. At birth the brain is

larger proportionally to the body weight (one-tenth) than that of any other of the mammalia ; yet its instinctive movements are so clumsy, and its skin so sensitive to cold, that it would perish if not carefully tended. Flechsig explains this by the incomplete development of the nerve-cells, of the grey matter of its brain, of the white nerve-fibres, and of the "association areas" which regulate the movements of the body and limbs. The senses develop in the following order :—Taste, smell, touch, sight, hearing ; then the faculty of co-ordinated movement. As early as three months some infants can distinguish persons from objects, gaze at bright or moving articles, and listen to sounds. From this age too, there is some ground for believing that infants of unusual intelligence have begun to *think*, and that their *sub-conscious education* has commenced. At six or seven months, an infant's attention can be aroused and fixed for a time, and it can distinguish one person from another, its behaviour being different to nurse and to mother. The sense of distance and that of direction next develop, and about the age of three years self-consciousness is established. Then (says Baldwin) follow personal affection, the social feeling, and imitation, which is the beginning of volition.

All the above faculties enrich the domain of the sub-consciousness, and the influences under which they are trained chiefly determine the *tendencies* of the infant's moral nature. From six years old, however, voluntary conscious education commences, and the conscious mind is forced, often painfully, into grooves of new ideas and facts, at first acquired much as a parrot acquires human speech. During the next eight years of school life a boy's brain enlarges so rapidly that it often attains, at fourteen, the average weight (48 oz.) of that of an adult man !

True education should follow nature's processes of

mental evolution. Under an observant and sympathetic teacher the sensations received by, and the faculties budding forth in the child's sub-consciousness, should be trained, corrected, and vivified by its own active or full consciousness and will. Much of child-nature is learnt in the nursery or the play ground. The universal success of Froebel's kindergarten system is due to its happy combination of education and recreation by dramatic and rhythmical exercise games which *train without fatigue* three or four senses simultaneously. That genius, Froebel, noticed that the essence of young children's play consists very often in the acting of a part, and the realising of a made-up scene. One of the charming features of child-life is its genuine happiness and fun amid the most squalid environment. Hence it is probable that a child's happiness springs more often from psychical than from physical causes. From their sub-consciousness spring the two deepest and earliest awakened moral qualities of children—Affection and the sense of Justice, or of Right and Wrong. Parents and teachers should be impressed by the *necessity* of being (or seeming to be) strictly *impartial*, and also faithful in the bestowal both of *promised* rewards and penalties. The scientific education of young children will be greatly promoted in our city by two recent movements:—(a) the opening of a School for Children of Defective Mental and Physical Organization; and (b) the formation of a Liverpool branch of the British Child-Study Association.

Among the faculties or mental qualities which have their springs in the sub-consciousness of man are the following:—1st The æsthetic sense. The sense of the beautiful is part of a man's nature; it is *unconscious* and instinctive in the true artist, poet, or musician, but is cultivated *consciously*. A genius evolves from his sub-

consciousness grand ideals, awakened usually by the sights or sounds of nature which are new to mankind; but to conform to the canons of Art, prolonged and earnest *conscious* work is also required.

2nd. Tact, which is the psychical analogue to the physical sense of touch.

3rd. The ethical element in man (according to Schofield), some persons being unconsciously gentle, kind, generous, and forgiving; others just as unconsciously rough, rude, and harsh.

4th. Intuition, upon which women act more often than men, and which is often successful—in connection with which I would remind you of Tennyson's shrewd question—

Is it so true that second thoughts are best,
Not first and third, which are a riper first?

5th. General synthesis, by which is meant the estimation by the intellect of the total sum of impressions received from any person, object, scene, or event. As there is time in this for the faculty of judgment and of comparison, general synthesis springs partly from the active and partly from the passive consciousness. Some persons can explain why they like or dislike, and others cannot; the former exercising general synthesis, and the latter intuition. For a man to act as an automaton he must be in a non-natural or unusual state, such as when hypnotized, when insane, or in a state of alcoholism, delirium, or that crazy enthusiasm which sometimes seizes crowds. I therefore hold that the Will is never "unconscious" (or even "sub-conscious"), as held by Dr. Schofield.

The accompanying diagram, by Dr. Schofield, which I have his kind permission to reproduce, shows not only what he considers to be the anatomical seats of our sub-

consciousness and full consciousness, but also, by Dr. Hill's plausible theory of sensori-motor arcs, demonstrates how large a proportion of nerve-impressions and nerve-actions are received and responded to by our *sub-conscious mind alone*.

Suppose the human brain taken out of the skull, and a drawing of a section made through the right half, near the centre, where the two valves ("hemispheres") unite, showing merely the nerve-tissue and centres, and omitting bloodvessels, membranes, &c. The shaded part, called "cortex," consists of grey nerve-cells, and is the seat of consciousness. Its folds are not represented here; they dip down into the white area where the seat of "*sub-(not un-) consciousness*" is placed by Dr. S., I think with probability. The large "ganglia" at the base of the brain also are composed of grey nerve-cells, and are concerned in both sensation and motion. The pairs of black dots, 1, 2, 3, 4, represent supposed nerve-centres, the right of each pair being "*sensory*" or *receptive* of nerve-sensations, and the left being "*motor*" or *initiating action* in response to a message from its companion, to which it is joined by black lines called "arcs." Now the process of receiving and acting upon a nerve-sensation is as follows:—1. An itching or tickling of the sole of the foot, for example, flies to the grey matter of the spinal cord (hinder portion) and reaches No. 1 pair of nerve-centres; from the "*sensory*" it is instantaneously passed along to its "*motor*" fellow, and the foot is moved in response. 2. Next, a more complicated sensation, such as involves coughing, sneezing, or winking in response, is transmitted from the spinal cord up to No. 2 pair, where the same process is gone through, perhaps in not more than one-fifth of a second. 3. A more elaborate series of sensations and motions, such as those involved in riding, skating, swimming, etc., will

reach pair No. 3 of the nerve-centres, and it is thought that these great ganglia, the *optic thalamus* and the *corpus striatum*, preside over our habits or acquired reflexes, and are the seats respectively of sensory and of motor memory. None of these three classes of nerve-impressions has as yet reached the cortex, the seat of thought. But now one reads a book, or writes a letter, and pair No. 4 are set in action, resulting in both sensations and movements of which we are *fully conscious*, and which are in no sense instinctive or automatic. This "arc" is the longest of all four, and I may illustrate it by the facts observed by Dr. Cattell with very delicate apparatus, that whereas it only takes one-tenth of a second to *feel* a hot or cold object, it occupies a second and a half to *see and read a word*.

The constant repetition of a voluntary action initiates a *habit* which is now scientifically termed "an acquired reflex." If of a useful and benign nature a habit is an economizer of nerve-waste, for it uses up the interest rather than the principal of nerve-force; but if of a baseless or mischievous kind it impairs and eventually ruins both nerves and character. The ease of a habit or acquired reflex—such as playing well on an instrument—is explained by Sir Michael Foster and Dr. Alex. Hill in this way. *At every repetition* of the special voluntary action which initiates a new reflex, the *motor* nerve-impulse *uses the same path* through the brain and spinal cord, because the original route offers the least resistance to the nerve-current set in action. This theory explains the marvellous feats of Robert Houdin, who trained himself when young to read aloud while juggling with four balls in the air; and of the accomplished musician, mentioned by Sir James Paget, who could play the most brilliant *prestissimo* passages on the piano, involving 720

muscular movements of the fingers per second, while conversing animatedly with those around him.

The part played by the sub-consciousness in memory, recollection, sleep, and dreams is an important one. Memory is well defined by Sir W. Hamilton as "the power of retaining knowledge in the mind, but out of consciousness;" and recollection as "the faculty of recalling what we know out of the un- [I should say *sub-*] conscious into the [actively] conscious mind." It is probable that the physical seat of memory is in the grey cortex of the brain, and in the large ganglia at the base. Post mortem examinations of the brains of persons of exceptional memories and great acquired knowledge show that the "convolutions" or folds of the cortex are unusually thick and deep-set. The remarkable arrangement into five layers of the grey nerve cells and filaments will some day be found to explain the reason why, in old age, the gradual decay of the faculties is often accompanied by a vivid recollection of far-past events, while the impressions of the previous day or week cannot be recalled. It seems impossible to overload some memories, and yet others again can but retain, apparently, very few facts, observations, or ideas. A man who can read or converse in four languages has stored up in his sub-conscious mind from 160,000 to 200,000 words, and, if in constant practice, can call up into his conscious mind any of them at short notice. Our sub-consciousness, then, is a receptacle into which are poured, from hour to hour, thousands of sense-impressions, only some of which are noted by our full consciousness. So great is the number, and so varied the character of these "sensations" which reach our brain-cortex during the day, that no human being could long retain a sane mind were it not for that blessed and absolutely necessary boon,

Tired Nature's sweet restorer, balmy sleep.

During healthy sleep, the active waste of the brain-substance going on all the time we are awake is repaired by specially-annexed nutrition from the blood-vessels; the surface of the brain has been observed to be more pale and less mobile than in the waking state; and the five special senses are quiescent. All sense impressions being excluded, and the will being temporarily suspended, the sleeper's thoughts rearrange themselves, and mingle, often in *bizarre* fashion, with the stored-up ideas of our subconsciousness. Of these mixed combinations, some may prove useful in our active life. Experience proves that it is generally well to pass through a night's sleep before making a very momentous decision: for a difficulty or an intricate problem is frequently solved in sleep. The most conscientious of our judges postpone a sentence until the morrow of the trial. It is a sign of "brain-fag," however, to dream constantly of incidents or subjects connected with one's daily toil: the environment of dreams should be far different, if sleep is to be refreshing. As to the much-disputed question whether perfectly normal sleep is *dreamless*, or always attended by dreams which the sleeper cannot recall on awaking, or sometimes one, and sometimes the other, I hold that Sir Wm. Hamilton's experiments on himself prove that the brain is active during sleep, and that if one is awakened artificially, whether suddenly or slowly, a dream of some kind will be consciously interrupted. But it is not a process involving tissue-waste of the brain-substance. I conclude, therefore, that our subconscious mind is in action during sleep, though not in a laborious manner. Somnambulism is an example of the subconscious mind in action unchecked by the conscious will.

From hypnotic phenomena we learn much of the operations of the human mind, in its conscious, sub-conscious, and supra-conscious phases.

So utterly separate are the workings of the sub-consciousness from the consciousness in deep hypnotism, that the psychologists, Dessoir, Janet, and F. W. H. Myers formed the hypothesis of a dual (or in some rare cases multiple) personality, a double *ego* in every human being. But this is untenable, because *identity of personality* is an essential normal condition of birth, even though one grant the *possibility* of occasional "obsession" by spirits, *e.g.*, in homicidal lunatics. These investigators scarcely allow enough scope for the uncontrolled influence of the *hypnotizer*, who can infuse, *voluntarily*, and *even involuntarily*, thoughts, ideas, and promptings to action into the mind of the subject without utterance, by "suggestion." Just as hysterical and maniacal attacks can be cured by a powerful hypnotizer, so ludicrous, mischievous, and even criminal acts may follow, by his suggestions, the awakening from hypnosis. The agent has only to strongly assure the subject that he can easily remember on awaking the suggestion made to him during hypnosis. The analogy to normal sleep of an *hypnosis without suggestion* is corroborated by the fact made known to me by an experienced hypnotist that the subject, if let alone, will sleep for eight hours, and then awake spontaneously and feel refreshed. But if suggestions are made, the awakening is accompanied with lassitude. Möll states that forgotten dreams are sometimes reproduced in the hypnotic state; this fact being a link between natural and hypnotic sleep. Dessoir knew a man who dreamt a dream which was abruptly cut short, and *on the next night took it up at the point where it had ended*, finishing it. Wolfart (of Berlin) reports the case of a woman who remembered, in the hypnotic state, all that had taken place in a similar hypnosis *thirteen years previously*, though totally oblivious of it during all that long interval. The explanation is, that it had all been

stored up in her sub-conscious mind. What is called "automatic writing" sometimes reveals reminiscences of a previous hypnosis; and four eminent investigators—Janet, Möll, Myers and Gurney—are of opinion that this phenomenon reveals the thoughts of the sub-consciousness, and should not be ascribed to the external agency of "spirits." Möll's experiment (described, p. 247 of his work on *Hypnotism*) certainly strengthens this view of "automatic writing." To a man, called by Dr. Möll "X," was given a sheet of paper, and a pencil which he was ordered to hold quite passively in an upright position, with its point lightly resting on the paper. No hypnotism was used. After asking "X" the question, "What had you for dinner yesterday?" to which "X" could not give an immediate answer, having totally forgotten, Dr. Möll engaged his whole attention by a lively chat about the weather, the theatres, &c., during which conversation "X" unconsciously wrote with the pencil the words "roast veal," which was a correct answer to the doctor's inquiry. Here it is only rational to suppose that the intelligence which moves the pencil is *innate*, and not external to the man. Similarly, automatic writing in "X's" case and others revealed the impressions made during hypnosis, which could not by conscious will be recollected. It is probable that this "automatic" mode of using a pen or pencil would aid us in recalling names, dates, or words, urgently wanted, but forgotten for the moment, by bringing them up from our "secondary consciousness."

"Sub-liminal consciousness" is a term much used of late, from *limen*, Latin and Greek for "a threshold," first used by Prof. Fechner. What he calls the Wave of Consciousness, or stream of psychophysical sensations and actions, rises above this threshold or boundary, marked by

natural sleep, as soon as we wake; remains above it during our waking hours; and sinks below it as soon as we become sound asleep. There are, besides, several moods or states of half-active and half-passive consciousness, such as reverie, and such unconscious conditions as catalepsy, trance, ecstasy, &c.: and to cover all these, F. W. H. Myers has invented the convenient phrase, "sub-liminal consciousness." He says:—"The range of sensation covered by our ordinary consciousness resembles [in its limitations] the range of temperature in an ordinary thermometer, which is a mere segment of cosmic temperature." "Each of us has an abiding psychological activity far more extensive than he knows. All is, I hold, conscious; all is included in an active or potential memory below the rest of our habitual consciousness." For all which lies below this threshold, "sub-liminal" seems the fittest word. I have drawn this diagram* to shew most of the phases or states of human consciousness which *are* passed through in a working day, or which *might*, in certain morbid or artificially-induced conditions (such as hypnotism, narcotism, alcoholism, trance, &c.) be experienced by any man or woman. Rising up from below the *limen* of sleep, the line A, B, representing the wave of living consciousness, passes through drowsiness into the normal alertness of the mind. It goes higher during the business of the day into mental tension, which may be followed by reverie, or "a brown study," such as cost Archimedes his life at the taking of Syracuse; afterwards, mental fatigue is felt, and drowsiness again comes on, followed by that exquisite draught of Lēthē—natural sleep. Below the threshold of sleep I have placed trance, trance-phenomena (clairvoyance, &c.), and ecstasy. Dreams I have not marked down, as they are but accidental accom-

* Necessarily omitted on account of limited space.

piments of sleep, and do not directly modify or affect the life-wave of consciousness.

The "supra-normal powers" of the sub-conscious mind include trance-states with their phenomena of clairvoyance, clair-audition, somnambulism, obsession, and ecstasy: all states in which the spirit and soul, especially the former, dominate the body, and exalt the special senses, while suspending the vital processes of waste and repair. Poets are often of the "psychic" temperament, and much of the transcendental subjective poetry of Shelley, Coleridge, Wordsworth, and Tennyson we owe to their moods of ecstasy and reverie. Fully a century before hypnotism was analyzed and understood, Coleridge wrote in his wonderful *Ancient Mariner* :—

He holds him with his glittering eye,
The wedding guest stood still, etc.

and

I pass, like night, from land to land,
I have strange powers of speech,
The moment that his face I see,
I know the man that must hear me,
To him my tale I teach.

Tennyson was not only a powerful hypnotizer of others, but had the rare gift of self-hypnotism, which he mentions in four of his poems.

To persons gifted with the powers above-mentioned, the term "psychics" (from $\psi\chi\acute{\imath}$, the soul) is given, because in their trance-state the soul and spirit seem to completely dominate the body and its senses. Perhaps many of us have these powers latent in us, but it is unsafe to cultivate them as long as we have practical work to do. Heredity accounts for some "psychics." I know a son who inherits it from his maternal grandfather, and a daughter whose father had this endowment.

Psychics or "mediums" I have met are usually divisible into two classes, whether male or female. 1st—robust, muscular persons with grey or grey-blue eyes, who are strong hypnotists; 2nd—pale, delicate-looking persons of slight frame, with dark-brown or black eyes, which have usually a restlessness in them, but sometimes a dreamy "far-away" look. In the trance-state, a psychic's senses seem to be so exalted in power as to perceive, or as they call it "sense," things that are happening at a distance, or even detect who has touched or worn any article submitted to their scrutiny. In this clairvoyant state they seem to have a seventh sense, which I may call "Interpenetration." The psychic seems to detach a portion of his immaterial organism, and cause it to float into a distant room (even previously unknown to him) and describe its furniture, etc., and what is taking place there. I have known one who could correctly describe internal diseases, as if his eyes had the power of "X-rays." Telepathic waves certainly exist in the ether around us, and I find the psychic specially sensitive to them, even to the extent of sometimes receiving premonitions of impending danger. It is to be regretted that so much imposture has gathered round the display of these powers as to discredit their existence in the minds of the scientific majority, and also that their exercise should be made a matter of £ s. d., and not *gratis* for the benefit of man.

It is my belief that the demonstration of these supra- or extra-normal faculties has been reserved by the Almighty for this "consummation of the age," to convince the "scientific" agnostics of the "powers of the age to come." Down here in this mundane sphere, man's triple nature is limited by a perishable body and half-developed sense organs. The greatest genius among men can but "see as in a mirror, in an enigma," as St. Peter

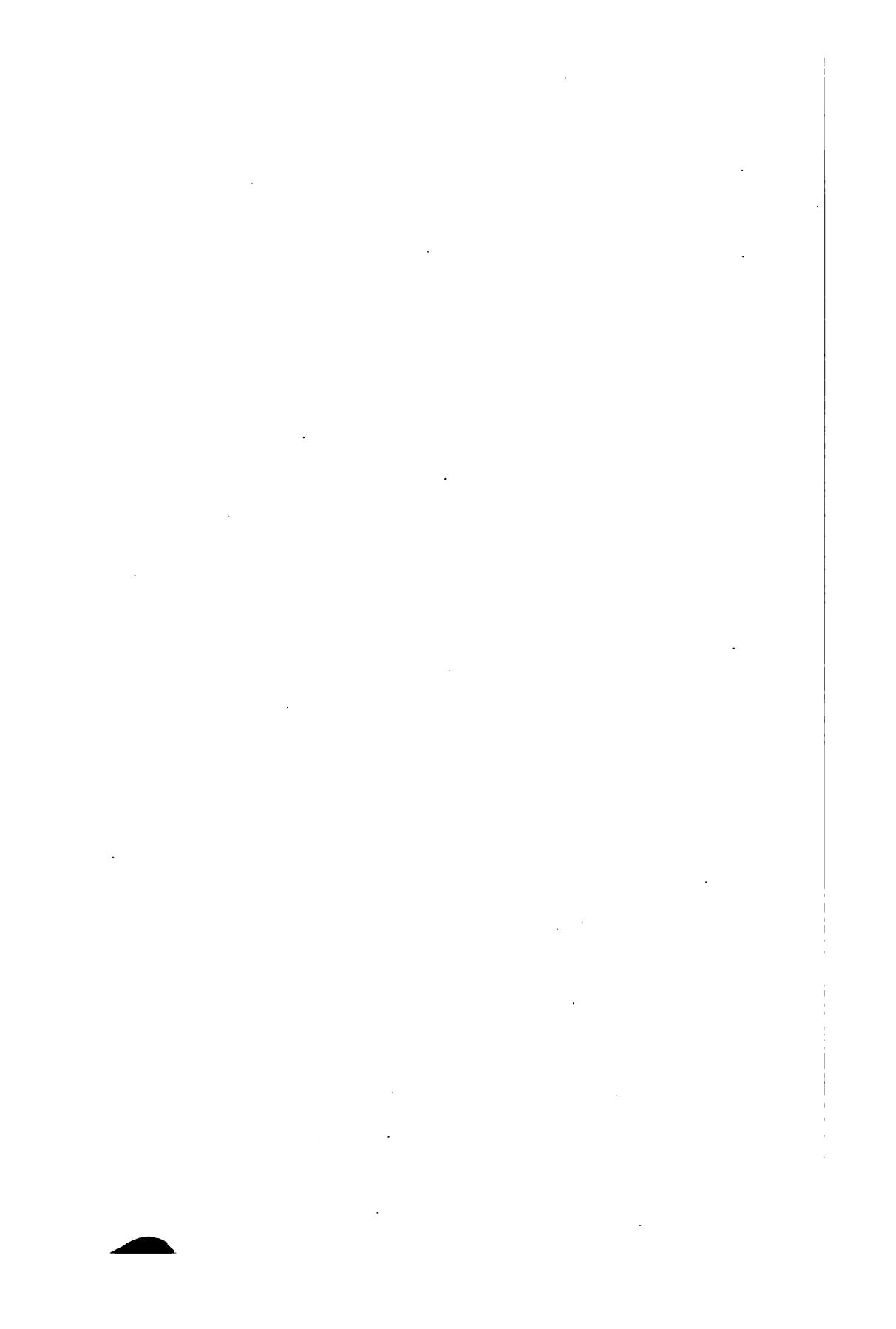
puts it, the secrets of nature, and the glories of heaven.
With its imperfections, its brevity, its frailties and sins.

Life, like a dome of many-coloured glass,
Stains the white radiance of Eternity.

But man is not without a guide in the maze of life.

The conscious will and mature intellect, when exercised under the control of a Christian conscience (a triple union, again) become, under God, both the arbiters of man's destiny, and the source of his supremacy. It behoves us, then, to guard both conscious and sub-conscious minds from all that is evil, so as to store up in the memory only that which it will not shame or grieve us to recall. For memory, as it is inseparable from personality, assuredly survives the death of the body. Those who accept the divine revelations in the Bible have the hope, nay the knowledge, independent of psychical experiments, that "beyond the veil" an eternal home awaits them, where these rougher forms of matter that we know, these crude senses, this inadequate marriage of brain to mind, and this frail, yet heavy and gross body, will all be exchanged for far more perfect conditions of being. We shall up there attain to complete mastery of soul over sense, of the *ego* over its faculties, and of the spirit over its environment. Then will the spirit-soul, united for ever to the etherealized body, fully exercise its transcendent powers in loving obedience to Him whose service is perfect freedom. There will be but one language—or it may be that thought will respond to thought without vocal utterance; intuition will be infallible; to conceive will be to achieve; to dream will be to realize; to imagine fresh symmetries of character will be to embody them

In loveliness of perfect deeds,
More strong than all poetic thought.



ON INDIAN FAMINES.

By J. ERNEST NEVINS.

NOBODY doubts the existence of frequent famines in India ; but most of us in this land of plenty do not realise how frequently our fellow-subjects suffer from these disasters. The Government Report of the Indian Famine Commission in 1898 reviews the various occasions of extreme scarcity or famine since the previous report in 1880, and the record is terrible. There was extreme scarcity or famine in different parts of India, sometimes over very large areas in the years 1884-5, 1888-9, 1890-1-2, 1896-7, and now 1899 has closed, and 1900 has begun with wide spread distress, the most severe distress that has been known. At present, there are over 5,000,000 receiving relief, and several millions more who are feeling the pinch of hunger more or less severely.

Now, what are the causes of these frequent famines? In old days, devastation from war, or from marauding bands, played an important part, and as lately as 1804 an important element in the cause of the famine in Bombay was the destruction of crops by the troops of the Maharaja Holkar. Other causes which have acted occasionally have been plagues of animals.

The great famine of 1876 was followed by a plague of rats. They appeared suddenly over an extensive area just before the ripening of the late harvest in February, 1878. They eat up the silky ears of wheat and millet, and laid the fields bare. Again, in June, 1879, a similar plague

occurred, the rats eating up the seeds as fast as the fields were sown. When the time for the October sowing came, the same thing happened. Everything that could be thought of to destroy the creatures was done, but without success. Amongst other things, a reward of a rupee was given for every 100 rat tails. Rewards were paid for sixteen million rat tails, but still the plague continued, till suddenly, about December, the rats disappeared as mysteriously as they had come.

Locusts have also destroyed the crops. The last visitation was in 1882-3. In that year the rain, due in June, came too early, and stopped the flight of the locusts to their customary breeding grounds. They deposited their eggs all over the ground, and in July, countless swarms appeared amongst the sprouting crops. All the measures taken were unable to get rid of the plague, till winds came to carry the locusts away. In both these plagues the peasants looked on with apathy, their idea in the case of the rats being that those animals were the reincarnations of people who, in a previous existence, had fallen victims to famines.

Occasionally, severe floods have caused local distress, but the most common cause of famine is drought.

India depends for its water supply on two sources, first, the melting snow of the Himalayas, which fills the great rivers of the north; and second, the rains brought by the S. W. monsoon, early in June, and by the N. E. monsoon, in November.

The sowing and harvesting of crops is regulated by the rains. The agricultural year begins with the advent of the S. W. monsoon. For a couple of months before that (that is, April-May) the land lies baked up, as hard as a rock. After the arrival of the first showers, in June, the ground is ploughed, and the rain crops are sown. These

are grains and pulses of various kinds, and rice. These should be sown by the end of June, or very early in July. About the second week of the latter month there is generally a break in the rains, and if this lasts too long the young shoots suffer. The harvest from this summer sowing is gathered in September. Generally about the end of September and in October there are rains, the last of the S. W. monsoon, and with their help the second or winter crop is sown. This consists largely of wheat; matures under the heavy dews of early spring; and is gathered in February–March; after which comes the dry resting time during the hot season of April–May. To get a good agricultural year there should be the early monsoon rains in June; the break in the rains in July should not last long, not more than a fortnight; and there should be the late S. W. monsoon rains in September–October; and the heavy dews in February. The failure of any of these conditions leads to more or less damage of crops, and in India it is specially necessary that the rains should come at the right time, rain at the wrong time being useless, and often harmful.

So much for the causes of famine dependent on nature's peculiarities. But we all know that India, during an average year, produces a great deal more food (grain and rice) than it needs, and even during a famine year India, including Burmah, produces enough food for the population, whilst here, at home, our own island does not produce a tithe of the food necessary for the people, yet we do not have famines. What are the conditions which lead to famine in India, when the country, taken as a whole, produces food enough for its wants, whilst we do not have famines in this country which never produces food enough for its wants.

One important condition is that the natives of India are

mostly agriculturists, and if their crop fails, everything is gone, whilst the bulk of our population produce articles for which food or its equivalent is received in exchange. A famine of coal or iron with us would be more comparable to the famine of wheat or rice in India. Moreover, we have such excellent arrangements for the import of food to our country, that we can hardly realise the conditions of a country which is starving, whilst the next country has an abundance of food to spare, but no means of sending it. This was the case in the Orissa famine in 1866. That province had not been visited by scarcity for a century, and its officials were untrained in watching the state of the food markets and the likelihood of distress. The prices of foodstuffs only rose slightly, so nobody realised what was happening, till suddenly they woke up to the fact that they had eaten up their reserves, and the new crops were being killed by drought. When they realised this it was too late to import food. The monsoon gales prevented the import by sea, the only road to Calcutta was an unmetalled one with two or three unbridged rivers, which were made unfordable by heavy rains (which came too late to save the crops), so that, though there was plenty of food to spare in Bengal, it could not be got to the starving district. It is estimated that a million people died before relief could be brought.

Another very important matter is the chronic poverty of the agricultural population of India. Those who admire the "good old days," say that there is actually more poverty under the British rule than under the old native kings. In their days there was no fixed taxation. When the maharaja wanted money he sent out a band which took what it could get. If the harvest had been good, the takings were good; if the harvest had been poor, there was nothing to take, but the farmer was not obliged to borrow

in order to meet the tax-gatherer's claims. Now-a-days the annual tax is a fixed amount. In a good year the farmer has a good surplus, but instead of saving it he has a wedding or funeral or some other feast, and spends his money in royal style. Next year, when the harvest is bad, he has nothing to spare, but the tax collector demands the fixed amount, and the farmer turns for help to the village money-lender. Or if the wedding or funeral comes on a bad year, the aid of the money-lender is again invoked, and the good crop of the next year is mortgaged. Now, in India, the unit of society is the family, not the individual. The debt of one is a responsibility on all members of the family, and descends from father to son. The result is that gradually a very large proportion of the village population has become in debt to the money-lender. Many farmers are really the slaves (practically) of the money-lender, who takes the produce of the land and allows the nominal owner the necessaries of life. If the produce of the land is nothing, the money-lender gives nothing, the farmer has nothing saved, and starvation stares him in the face.

This is what the admirer of the good old days says; and as regards the large number of agriculturists who are in debt, the statement is true, but we have no evidence that things were any better in the old days.

Having now reviewed the causes of famine, the question arises, "How can we prevent their recurrence, and mitigate their horrors when they do recur?"

We can do something for future generations by educating the present one, but the main agencies for fighting famine are irrigation works, increased railways, and other means of communication. Irrigation canals have been made in many places with great success. Wherever possible, the canal draws its supply from a river, and in

those highly-favoured districts through which flow snow-fed rivers, such as the Indus, Ganges, Jumna, etc., the success attending irrigation canals has been very great. When summer comes the snow melts, and the river and its canals are full, no matter how great the drought. But the country south of the snow river tracts is not so fortunate. Its rivers themselves depend on the fall of rain, and in time of drought, when their canals most want water, they have least to supply.

Where no rivers are available to feed canals, artificial lakes are made—as in our own Vyrnwy supply—by carrying a dam across some suitable place to intercept as much water as possible during the rains.

In this country we have never to go very far to find something deserving the name of “valley,” which, by a comparatively small dam, can be made into a more or less deep lake; but on the great Indian table-land, the engineers have to be thankful for mere depressions in the country, which require enormous dams, and provide only shallow lakes of very large area. Such lakes suffer to an appalling extent from evaporation in the hot, dry Indian climate, and the loss of water by this means increases in proportion to the severity of the drought. The third means of supplying irrigation canals is by wells, but these are only available for canals on a very small scale. One sees them everywhere, with various plans for raising the water. Besides the irrigation works, which help to save the crops, the famine-preventing agents are those which facilitate the imports of foods into affected districts, namely, railways and metalled roads, both of which are being pushed forward by the Indian Government as fast as funds permit.

India has many splendid roads, but large areas of country have still only unmetalled tracks, almost useless in bad weather.

Let us turn now from the prevention of famine to the measures taken for dealing with it when it does occur. In the good old days, as far as can be learnt, nothing was done. The people regarded the calamity as the act of God, and waited apathetically till their time came. Fatalism ruled both Hindoo and Mahometan. The Britisher believes in works as well as faith, and if Britain has nothing else to boast of, she may justly be proud of the splendid devotion and self-sacrifice of her sons and daughters, official, missionary, and private, during Indian famines.

The Indian Government has been studying famines since 1791, when relief works were first used in Madras, and has organized the most perfect system of relief that the world knows. One plan after another has been tried, and either approved and developed, or else been found bad by bitter experience and abandoned. For instance, in the famines of the early part of the century, Goverment imported food. This was found not to be a good plan, and the supply of food was left to the ordinary grain dealers for a time. But in the Behar famine of 1873-4, the old plan was tried again—Government imported 480,000 tons of grain from Burma. Three million people were kept for seven months, till rain came and the distress ceased. But when that happy time came there were still 100,000 tons of grain left, which Government had to dispose of at a loss. Since then the supply of food has been left to the ordinary traders; whilst Government has provided the people with the means of buying, in some cases, and with rations in others. In early days, Government only gave work and pay to those who could work, whilst non-workers were left to private charity. Now, provision is made for all, even for the ladies who may not be seen by men, and must, therefore, have food supplied in their own homes. In the

early days no provision was made for a day of rest. Now-a-days, the rest-day is allowed, with pay, in all except special cases, called test works.

By the regulations of the present time the possibility of famine is ever before the eyes of the District Officer. He has to keep a constant look out on the prices of food-stuffs, and if these rise more than a certain amount above normal (generally 20-25 per cent. above normal), he has to report to Government. The agricultural official has to send in constant reports on the cattle and crops of his district—how they are at the moment, and what is likely to be the yield of the harvest. The meteorological official has to send in reports of weather, with forecasts for the future. The irrigation official has to report on the water supply, rivers, lakes, wells, etc. The police department has to report on crimes pointing to scarcity, and on any unusual wandering of the people, which is often an early indication that wages are bad. It has also to take care of wanderers who are suffering from shortness of food, and direct them to the proper place to get relief.

And last, but by no means least, the Public Works official has to keep always ready plans for relief works in his district. For instance, if from the information of other departments it is feared that relief works will be necessary, he has to send in plans for works profitable to the country in some way which will employ hundreds or thousands of people for three, six, or nine months, as the case may be, or if there are no such works possible in his district, he has to know where work can be got. In many cases, too, he has to arrange for the housing of the labourers.

These relief works are the backbone of the famine code, the principle being that everybody who can work must work, and must receive pay sufficient to keep them from

starvation, according to the actual price of foodstuffs at the time. As the applicants for relief are all sorts and conditions of men, women, and children, who are not skilled, the relief works are mostly earth works which anybody can do, such as excavating reservoirs (or tanks, as they are called), making earth dams for artificial lakes, digging irrigation canals, making railway embankments, roads, etc. Many of these works would have to be done some time, famine or no famine, and in such cases it is calculated what the work would have cost under ordinary conditions, this is deducted from the actual cost, and debited to the Public Works department, the balance only being charged to the famine fund of the government (not the famine funds raised by private subscription). No work may be done by contract. The labourers must work directly under government officials, who are responsible for regulating the task according to the worker's strength, and for seeing that the workers get their pay without deductions by overseers, foremen, etc. The pay is sometimes given in money, sometimes in food, and is regulated in different classes, the lowest being the minimum that will keep a person in health without work, and the highest, that which will keep an able bodied man, doing a good day's work, in health. If the able-bodied man does not choose to do his proper work, he is fined part of his pay or ration; but the ration of severest penalty must always be enough to keep him from starvation. The regulations for the conduct of these relief works, their nature, whether they should be large public ones or small village ones, etc., are most elaborate, and so are those for the classification of sufferers, ranging from the able-bodied skilled workman to working children under 12, and non-working children under that mature age, the pay or ration for each being carefully calculated and fixed. With the workers, who are

men, women, and children, come various dependents. These are mostly children, but they include the old and infirm, imbeciles, etc. In most parts of India during the earlier stages of famine, they, or the workers on whom they are dependent, receive a money or grain allowance, but in many cases, especially as the distress becomes more severe, they are given cooked rations at Government Kitchens. These are established at the relief works, central kitchens for districts are also provided to supply groups of villages, for there are always left a number of people in the villages who are too weak or old to leave their homes, or are attending to the sick, the babies, and the village business.

Another agency is the Poor House. In this country the Poor House is always with us, and always full, but in India there is no equivalent for our workhouses (except one or two for the use of Europeans). It was mentioned before that the unit of Hindu society is the family, and each family supports its own poor as much as possible. The poor who have no families to support them are practically kept by their caste fellows. A famine poor house is for the reception of those who have no homes, or who cannot be sent to their homes, or who, on arrival at the works, are too starved to work. Food is provided till their health improves sufficiently to enable them to work, or to return to their homes if they have any. Another class of people who are sent to the poor house are the lazy able-bodied people who will not work. Discipline is made very strict, and food is kept very short, so that sooner or later they come to the conclusion they had better work.

Another very important institution is the Famine Hospital, which receives all sick people and those so starved that they are too bad even for the poor house. The

mortality amongst these badly starved people is very high, even if they are treated with the greatest care after reaching the hospital.

Special efforts are made during famines to keep the children alive and well. Of course, if the children can work even nominally, and Indian children do work in the fields from very early ages, they have to comply with the great principle, those who can work must work. The small or weakly ones are generally put for the day in a sort of nursery enclosure under the charge of some old lady, whose whole duty is to see them fed and returned to their parents at night. Many are rescued after being deserted by their parents, and many have lost both parents from starvation or sickness, so they become the permanent children of missionaries or of government, both of which bodies have to support large famine orphanages.

Besides all these forms of relief, gratuitous relief is given to many people. Those who have come down in life and would rather starve than go to public relief agencies, those who from social or religious reasons cannot work at the relief works or mix with the general applicants at the kitchens and poorhouses, and those who are tending the sick, or, for various causes, cannot be relieved in other ways. It is very necessary, with gratuitous relief, to beware of fraud, or of pauperising the people. Mr. Ozanne* gives an example of the kind of fraud practiced. A certain Brahmin said he had eighteen dependants, womenfolk and children, etc., in his family, but as the women could not be seen by men it was impossible to verify this. Mr. Ozanne demanded to see the backs of the eighteen if he could not see their faces. This was refused,

* E. C. Ozanne, Esq., C.I.E., the late head of the Bombay Agricultural Department, and one of the most experienced Indian Famine Officials.

and when a senior officer arrived, the Brahmin complained to him that his family was starving to death through Mr. Ozanne's cruelty. The senior backed up Mr. Ozanne, and in course of time the Brahmin came and said one of his family had died of starvation. Mr. Ozanne replied, "show me the backs of the seventeen who are left." The Brahmin refused, but as he did not show signs of starvation, Mr. Ozanne remained firm. At last the Brahmin was persuaded to take some wool for his women to spin, and wages were given for this. All gratuitous relief was refused, but wool given. The Brahmin remained fat, and Mr. Ozanne felt that he had defeated one attempt at fraud.

The more one reads of the Famine Codes, the more one is struck with the care and kindness which have actuated the members of the Indian Civil Service in drawing them up, care not only for the people, but also for the cattle, special arrangements being made for taking them to Government Reserved pastures, and for providing water and fodder on the way.

As has been mentioned more than once, the principle on which all the Famine Codes are based, is that everybody who can work must work, even if their work is merely nominal. The advantages of this are numerous. First, work and the discipline that must go with it, act as tests of the need of the applicants for relief, and keep away those who are not really in need. Secondly, it has been found that it is much better for the people to have definite occupation, which at all events keeps them in the fresh air, in contact with scenes of life and energy. Many of the sufferers have lost their money, cattle, children, parents, and what not, and are in a depressed mental condition, and we all know that for such people a life with nothing to do but mope and brood over sorrows is bad. Work, in many cases, is quite nominal, and special pro-

vision is made for all those who, for any reason, cannot work, *e.g.*, Zenana ladies, the infirm, the able-bodied who cannot leave their home duties, etc., but in all such cases strict enquiry is made, and the recipients of the gratuitous relief are visited personally by officials. I was going to say the "applicants" for relief, but in a large number of these cases, especially amongst the ladies in Zenanas, the relief has to be forced on them, and in their cases the government would be powerless without the help of the lady missionaries of the various Zenana missions.

Indiscriminate charity has been found worse than useless, as the following description by Mr. Ozanne of such charity in the Mysore famine will show.

My first duty, on arrival at Bangalore, was to convert a large open "kitchen," as it was called, into a relief poorhouse on the Bombay system, and stop the indiscriminate charity with its bad results. Twice a day the doors were opened, and about 4 000 wretched beings crowded in. Some were still strong, but many were emaciated, and many more were suffering from diseases brought on by exposure, and by eating raw grain, etc. The crowds were seated in rows, and the cooks marched along these lines, throwing into each lap the allotted dole of cooked food. Often the numbers were greater than expected, and the food did not go round. Always there was a scramble, the strong trying to seize the portion of the weak. The din was terrible, and the confusion worse. As soon as the food was distributed, the people were driven out again. Many went as hungry as they came; many were injured in the struggle to keep their food, and sometimes dead were found, who were tied to a bamboo pole and carried off to the burial ground, just as they were found, without any covering. The same scene was re-enacted in the evening, and afterwards the crowds went to wander about the city, and sleep in the streets.

About that time, no less than 200 corpses were picked up daily in the streets of Bangalore. The Famine Commissioners doubted the numbers, and I had the melancholy duty of counting the corpses twice a day, and seeing them put into carts to be taken to the large grave, daily prepared, where they were thrown in, one on another,

and covered hastily up. Now these poor victims were not the degraded paupers of the state, but people who, a few months before, had been respectable peasants. They had been driven from their villages by starvation, leaving the sick and aged behind to die; they had wandered from kitchen to kitchen, diminishing in numbers—child separated from parent—wife from husband—as one or other could continue the weary trudge to Bangalore. As they moved on, they sold what they could sell, including their clothes, and, when they reached their goal, they found nothing but the terrible daily fight for food at the kitchen. Most became wholly unhuman, wholly unmanageable, except as brutes by fear or the hope of food. The conversion of the kitchen into a poorhouse took some days. First, two other poorhouses were got ready, and the most emaciated from the daily gatherings were quietly conveyed to them. Some few who had homes in Bangalore were put on the gratuitous relief register to receive a daily dole of uncooked food, and thus be kept away from the kitchen. Meanwhile, an engineer had prepared a road-work close by, and collected tools and clerks.

On the day fixed for closing the kitchen two British officials came to help me. We opened the doors as usual; no one having any suspicion of our intention. When 1,400 were in we closed the doors. There was a terrible howl, and it was long before we could set to work to divide the able-bodied for work, the sick for the hospital, and the feeble for the poorhouse. As each batch of able-bodied was separated it was forced to the door, and the people were told they would receive a tool outside, and wages for work, but no further admission to the poorhouse as long as they kept well. Next the sick were placed in carts, and sent to the hospital, where doctors, food, and medicine were waiting, but everyone able to resist, resisted with all his might, for they saw they were being deprived of their freedom.

Each day the same system of separation was carried out, till in time order was fairly restored.

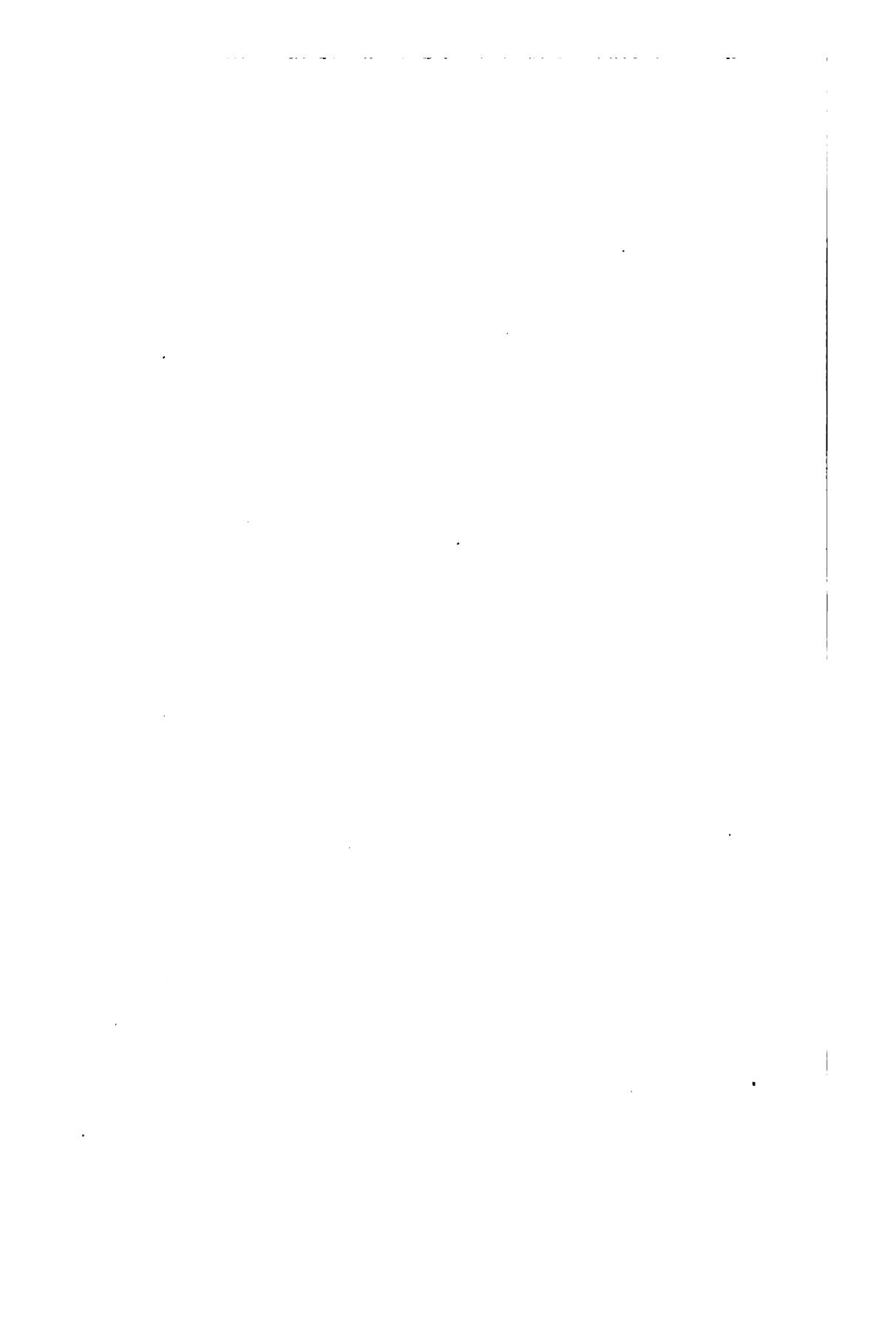
The next question is:—"If the Indian Government is doing all this, what is the use of private subscription"?

The Indian Government has undertaken the responsibility for famine relief, but its duty to the taxpayers requires that that relief shall be the minimum which will keep people from starvation; and that it shall be hedged

round with enquiries, and tests, and precautions which may prevent pauperism or fraud. Outside the Government action there is wide scope for private charity, or rather, for the use of private funds administered by private people in co-operation with Government officials.

The uses to which private funds are put are various. During the famine, providing extras for workers beyond the Government mere subsistence pay, clothes, blankets, medical comforts; extra attendants in hospital, in the poor-houses, and for the babies; distributing medicines, food, and comforts to wanderers not under government care; keeping extra poorhouses and kitchens on the roadsides; maintaining and educating orphans; giving relief to Zenana ladies, and those whose pride prevents their accepting Government help; providing work and wages for the above in their own homes; supplying food at cheap rates to those who are not actually poverty-stricken, but very much pinched.

And after the famine is over, private charity can give seed, implements, bullocks to agriculturists who have lost their all, and provide subsistence between sowing and harvest; start the broken-down artizan again with tools and work; supply food for cattle; send sufferers to their own homes; provide for orphans and those who have lost their breadwinner.



SAMUEL BUTLER AND HIS *HUDIBRAS*.

By MISS DICKIN.

UNIV. COLL. PRIZE ESSAY, 1899-1900.

SEVENTEENTH century literature is intimately and peculiarly associated with seventeenth century history. From the outbreak of the civil war in 1642, almost everything that was written takes its colouring from the troubles that distracted the times. Milton, the master spirit of the age, had no sooner given ominous mutterings of the storm that was imminent than he threw aside his singing robes and consecrated his pen in noble sacrifice to the interests of the civil and religious liberty of his country. And Milton's action at this crisis is representative. Here and there a solitary singer, like Robert Herrick, or a dreamer of pleasant dreams, like Izaac Walton, lived and wrote in his arcadian bower, unmoved by the babel of contentious voices around him. But, for the most part, the literature of this momentous period in our history is, first and foremost, polemical in character.

With the Restoration, Letters, in the more specific sense of the term, revived; but for many years to come almost every writer of name continued to reflect from one standpoint or another the great national upheaval behind him. To attempt to read the *Samson Agonistes* of Milton, or the *Pilgrim's Progress* of Bunyan, apart from any consideration of the conditions under which they were written, were to rob them of that intensity and individuality of expression which is the breath by which they live. Similarly, the scathing satire of Dryden's polished verse,

and the inexhaustible wit of the author of *Hudibras*, become innocuous and pointless divorced from the history of the times that gave them birth.

When the reign of "the saints" ended in anarchy and confusion, and the Royalists, in their riotous exultation, rode roughshod over their fallen and discomfited foe, it was obvious that nothing in the way of satire would come amiss, provided only it served to accentuate the situation and hold up to ridicule the erstwhile dictators of the national conscience. When, therefore, Samuel Butler, in the very nick of time, doled out his irresistible burlesque on the fanaticism of the sectaries, he found an enthusiastic public to his hand.

Looking back from the years of disaster and dishonour that followed, the appearance of *Hudibras* seems to us to indicate with exactness the high water mark of the triumph of the loyal subjects of Charles II.

If we may take Mr. Pepys' word for it, as good be out of England in his day as be unacquainted with *Hudibras*. To acknowledge oneself insensible to its humour asked some courage on the part of any man who aspired to be regarded as a figure in society. Those of us who have attacked the satire again and again, and have despaired of making anything of a chaos of wit so prodigious and so involved, should find satisfaction therefore in Mr. Pepys' reiterated confidences of a like experience.

Towards the end of 1662, he writes in his diary: "We fell into discourse of a new book of drollery in use, called '*Hudebras*,' and I would needs go find it out, and met with it at the Temple: it cost me 2s. 6d. But when I come to read it, it is so silly an abuse of the Presbyter knight going to the warrs that I am ashamed of it; and by and by, meeting at Mr. Townsend's at dinner, I sold it to him for 18d." A month later he tells us he is constrained to

buy the book again, "it being certainly some ill humour to be so against that which all the world cries up to be the example of wit; for which I am resolved once more to read him, and see whether I can find it or no." After this losing transaction, one is not surprised to learn that Mr. Pepys practiced some caution when the second part of *Hudibras* appeared. This time he borrowed the book, in the first instance, "to see," as he says, "if it be as good as the first, which the world cried so mightily up, though it hath not a good liking in me, though I had tried but twice or three times reading to bring myself to think it witty." Four days later, in Paul's Churchyard, Mr. Pepys was induced to purchase, amongst other gems of literature which "his nature was earnest in," both the first and the second parts of *Hudibras*, as being the book "in greatest fashion for drollery," though again he confesses his inability to find it out.

Some years afterwards there is an entry in this entertaining diary, the brevity of which is matter for regret. It is to the effect that Mr. Cooper, Mr. Hales, Mr. Harris, "Mr. Butler that wrote *Hudibras*," and Mr. Cooper's cousin Jacke, all dined with Mr. Pepys; and the company, "being all eminent men in their way," pleased their host mightily. Could the genial diarist have foreseen how grateful aftertimes had been to him for some crumbs of Mr. Butler's conversation on this occasion, we should in all likelihood have been a degree nearer to intimacy with one of whom we know only enough to make us desirous of knowing more.

As it is, the material at our command for piecing out the life of the creator of *Hudibras* is scanty and unreliable in the extreme. His biography finds no place in any of the popular series of the *Lives of Men of Letters*, and when we turn to the *Dictionary of National Biography*, the

dearth of information respecting him is the chief point emphasized. The son of a small farmer of Strensham, in Worcestershire, the chances are against his having received a university training, though his friends have shown a pardonable desire to claim this distinction for him. The year of his birth was 1612, and about 1630 we find him acting as justice's clerk to a Mr. Jeffreys of Earl's Coom, Worcestershire. Here, we may take it for granted, he laid the foundation of that intimate and technical knowledge of law and legal proceedings which is so prominent a characteristic of his writings. Painting and music, too, he is said to have studied in his early years, but with indifferent success. His allusions to it in his satires prove that he was no lover of the latter, and of his productions on canvas it is recorded that they served in a later day to stop windows and save the tax, "and indeed," his editor remarks, with more candour than compliment, "they were not fit for much else." When next we hear of Butler he is attached to the household of the Countess of Kent, at Wrest, in Bedfordshire. In what capacity he served the Countess is not known; but while there he appears to have had free access to a noble library, and the advantage, too, of constant intercourse with the great Selden, who held office in the same household.

But it is Butler's third service, his sojourn in the house of Sir Samuel Luke, again in the county of Bedford, that has attracted most remark, this being, in all probability, the school where he studied to most purpose the manner and matter of his famous satire.

How it came to pass that a man of Butler's temperament and strong political bias should accept service as secretary—or whatever else may have been his vocation—in the house of a Presbyterian officer of standing, during the critical years of the trouble, and retain that post

throughout the democratic order of things that followed, his patron being scout-master general for the county of Bedford to Cromwell's government, is a somewhat inexplicable circumstance. Either, it would seem, Sir Samuel Luke was a man of considerable magnanimity of disposition, and tradition has done him an injustice; or, and this is perhaps the more probable conjecture, in prolonging his residence with the presbyterian knight, Butler had his own game to play, and to this end he maintained an indifferent front and kept his itching satire under restraint, day by day enriching his commonplace book with many a side light on Puritan diplomacy, and many a trenchant criticism on Puritan casuistry.

Sooner or later he knew that the whirligig of time would bring in its revenges; with patience, therefore, he endured his long apprenticeship and bided his time. No sooner was the Restoration ushered in than he put up openly for place under the new *regime*, and was presently appointed secretary to the Lord of the Marches at Ludlow Castle.

With his marriage, however, a year or two later, to a widow of means, Butler resigned his office at Ludlow. This he did apparently on the strength of his wife's income, and with the intention of making letters the business of his remaining years. Already the greater part of his *Hudibras* was written. The first part of it was published at the end of 1662, and the second part a year later. Not till 1678, two years before its author's death, was the third and last part of the satire given to the world. "In this mist of obscurity," wrote Dr. Johnson, reviewing the meagre ascertainable facts of the poet's career, "passed the life of Butler, a man whose name can only perish with his language. The mode and place of his education are unknown; the events of his life are variously

related ; and all that can be told with certainty is that he was poor."

Notwithstanding Dr. Johnson's categorical assertion of it and the general acceptance of the tradition, no authentic account has come down to us of the circumstances and extent of Butler's poverty. Even supposing that his wife's income failed them, through bad investment or some other cause, as we are told it did, with men like the Earl of Dorset and others in high places among his friends and patrons, and his book in everyone's mouth, the story of his actual destitution is not easily credible. At the same time, we have to reckon with what we know of Butler's peculiar temperament. The writer of the article on him, in the *Dictionary of National Biography*, is probably not far wrong when he suggests that he was not an easy man to help. "It is not plain," he remarks, "that he had any talent save this one of matchless satire, and in his private intercourse he was unpleasing. From childhood he would make observations and reflections on everything one said and did he had few friends, and was not careful to retain those few." Moreover, we gather from other hints thrown out by contemporaries, that Butler was a somewhat fastidious man in the matter of employment. "He might have had preferments at first," Aubrey records of him, "but would not accept any but very good, and so got none."

Be this as it may, there is no disputing the fact that Butler died a disappointed man. The good fortune he looked for as the sequel to his well-received literary labours he never realized ; and the incongruity between the steadfast loyalty he cherished and the inadequate recognition he received from the party whose hands he had strengthened was seized upon by his fellows as a typical illustration of the irony of the poet's fate. Otway,

a contemporary, solemnly enjoins all those who would affect the poetic muse, to call to mind "how Butler's faith and service were returned ;" and Oldham, another satirist of the day, points his moral with a lengthy citation of the fortunes of the most popular poet of his time :—

On Butler who can think without just rage,
The glory and the scandal of the age ?
Fair stood his hopes when first he came to town,
Met everywhere with welcomes of renown ;
Courted and lov'd by all, with wonder read,
And promises of princely favour fed ;
But what reward for all had he at last ?
After a life in dull expectance past.
The wretch at summing up his mispent days,
Found nothing left but poverty and praise.

Dryden, again, has a well-known reference in verse to "unpitied *Hudibras*" (meaning Butler), and, in a letter, he bitterly reflects on the evil days on which the muse had fallen. " 'Tis enough," he says, "for one age to have neglected Mr. Cowley and starved Mr. Butler."

Finally, the epigram inscribed by the wit of Samuel Wesley, on the setting up of Butler's monument in Westminster Abbey, turns to excellent account this same tradition of poverty :—

When Butler, needy wretch, was yet alive,
No generous patron would a dinner give :
See him, when starv'd to death, and turn'd to dust,
Presented with a monumental bust,
The poet's fate is here in emblem shown,
He ask'd for bread, and he received a stone.

In spite of the happy vein of raillery which he affects, there is a pathos which tells its own tale in Butler's several allusions to his disappointed hopes. In his poem entitled "Hudibras at Court," he has these lines :—

Now you must know, Sir Hudibras
With such perfections gifted was,

And so peculiar in his manner,
That all who saw him did him honour;
Among the rest this prince was one
Admir'd his conversation . . .
He never eat, nor drank, nor slept,
But Hudibras still near him kept;
Never would go to church or so,
But Hudibras must with him go . . .
Now, after all, was it not hard
That he should meet with no reward,
That fitted out this Knight and Squire,
This monarch did so much admire,
That he should never reimburse
The man for th' equipage or horse,
Is sure a strange ungrateful thing
In anybody but a King.

It is to Butler's credit that, in the face of such scant recognition of his merits, his Royalist principles remained unshaken to the end. Not so keen-edged, perhaps, is his satire against the Puritans in the third part of *Hudibras*, as in the first, but of his continued loyalty there can be no question. It answers throughout to his own fine conception of it as—

Still the same,
Whether it win or lose the game;
True as the dial to the sun,
Although it be not shin'd upon.

At the outset of our study of *Hudibras*, we must get rid of Mr. Pepys' conception of the book as "a silly abuse of the Presbyter Knight going to the warrs." It is true that the hero's equipment is a military equipment, but, as Dr. Johnson observes, though he is sent out "a-colonelling," he is never brought within sight of war. As the Royalists knew to their cost, the Puritans were not contemptible in arms, and it fell not within Butler's scope to make genuine and proved valour ridiculous. The fact is, and Dr. John-

son again hits the mark, our author aboured under the weight of a two-fold and divergent motive. The spell of *Don Quixote* was upon him, and when he fell into the snare, and borrowed the form of Cervantes' romantic fiction, he found himself handicapped with a knight and squire, equipped for deeds of martial prowess, where no martial prowess was required of them. In the exquisite satire of the Spanish writer, the means taken to expose the extravagances of knight errantry tally exactly with the practices ridiculed. In *Hudibras* it is otherwise.

The whole conception of mediæval chivalry, admirably fitted, as in the hands of John Bunyan it presently proved itself to be, for the serious expression of the spiritual conflicts of the individual Christian, had nothing in common with that professional hypocrisy which was the fungous growth of the Puritan policy, and at which, chiefly, Butler aimed the shafts of his incomparable wit. This want of homogeneity, this attempt on the part of Butler, if we may choose to regard it so, to make his satire cut two ways, is largely answerable for the complexity of *Hudibras*, for the want of directness which makes it difficult at times to determine the true butt of its ridicule. Hence the satire, as a whole, gains in clearness of drift in proportion as we are able to keep the romantic element, which is the form of it, distinct from the political, which is its spirit. At the same time, the skill with which Butler has handled these ill-sorting conditions, making use of the one to heighten the effect of the other, should not escape our admiration.

It were long to enumerate the many points of contact between *Hudibras* and *Don Quixote*, but a few illustrations may serve to show how constantly the facetious story of Cervantes was in Butler's mind, and how reluctant he was to lose sight of his prototype. Even to the account of its

early fortunes, the universal applause with which it was greeted, and the spurious sequel which its success provoked, and which anticipated the genuine second part, the history of Hudibras is but the history of Don Quixote repeated. Comparing the plots, there is a line of Butler's, in which he describes his own hero as, "sauntering still on some adventure," and it would be hard to light upon a phrase which sums up more admirably than this the whole action of the story of *Don Quixote*. And when we look into the nature of the adventures of Hudibras, his obtrusive interference in the bear-baiting fray, and in the "skimmington," his appeal to Sidrophel, his imaginary conflict with demons, they are, one and all of them, as irrelevant and thankless as the adventures which constantly put to proof the valour of Don Quixote's arms.

Nothing, again, by way of mockery, could be more felicitous and more Quixotic than Butler's transformation of the village pound and stocks into a castle of enchantment, and the warder thereof into a magician of supernatural art. As to the love episode, which hangs fire to the end, and is the mainspring of so many a subsidiary action, this is in all respects on a par with the model, save that the romantic effect is necessarily weakened by reason of the *rôle* of hypocrite which Hudibras is created to sustain. Like Cervantes' hero, too, Hudibras is given to wresting from their obvious signification the common-place events around him. The pedantic harangue, for instance, whereby he transmogrifies into a pagan pageant the rabble rout who give him a taste of their wares, is paralleled again and again by the persistent delusions of Don Quixote. And as in one story, so in the other, the vision of the squire is unaffected by any imaginary medium, and he is consequently enabled to make repeated capital out of the folly and credulity of his master.

But there comes an end to all affinities between the respective characters when we turn to the primary significance of Butler's satire.

The exposure to ridicule in his person of all that was odious and despicable in a contemporary faction in the state, separates Hudibras poles asunder from the amiable and simple-hearted Knight of La Mancha. However ridiculous Don Quixote may be, he never falls from the ideal character he emulates, never for a moment forfeits our esteem, or becomes contemptible in our eyes. But, if we regard Hudibras at all as other than a monster; or a puppet, set in motion for our diversion, it is without pity for his misfortunes, and with no feelings save those of detestation and loathing for his personality. And in this particular he fulfils to admiration the design of his creator. And Butler's satiric art finds no higher exemplification than the increased opprobrium which accrues to the knight from the attitude of mock chivalry which is assumed towards him. Without a single redeeming feature in his portrait, the romantic garb that is flung round Hudibras serves only to magnify to grotesqueness the uncouthness of form and unchivalrousness of heart which so eminently distinguish him.

But Butler's *Hudibras*, as we have said, is not primarily a satire of romance. This element in it is little more than accidental and by the way. It is as the first writer of political farce in our literature, the originator of that kind of facetious criticism on contemporary politics which has retained its hold on the English people up to the present day, that Samuel Butler makes a claim upon our regard; the more so, that in his particular vein of satire he stands unrivalled and alone. In a sense, *Hudibras* was the *Punch* of the Restoration period; and, as the readers of it to-day are led on by the perpetual jingle of its mocking rhymes

till they lose themselves in its labyrinths of wit, and as they admire to exhaustion its endless felicitous phrases, its ingenious turns of expression and far-fetched and procrustean similes, they can readily understand the popularity of the satire with the triumphant Royalist, and readily enter into the zeal of prince and subject as they vied with each other in committing to memory whole periods of wit so extraordinary that to be acquainted with it was to shine in something of its reflected light.

If ever in the course of history the turn of political events, the clamour of discordant voices in the State, invited the criticism of healthy satire, it was at this period. And the nation should count itself happy in that the rise of political parties, in the modern sense of the term, was accompanied by the rise of a satire not too bitter to provoke laughter, and not too limited in its range to be blind to the follies and foibles of the age in general, irrespective of party distinctions.

Let it ever be remembered that side by side with the ineffable scorn of Dryden's invective, the lash that blistered where it fell, men had another, and perhaps more salutary, criticism on contemporary affairs to turn to, and it is no discredit to them that the criticism that kindled mirth was more often in their mouths than that which fostered bitterness.

In our own day, when the Puritans may no longer be decried with impunity, we do well to turn over afresh the pages of our *Hudibras* and temper our judgment of both parties by an enquiry into the basis of this unique satire. From what we know of him, we are probably safe in concluding that Puritanism, even at its best and noblest, had little in it that was attractive to a man of Butler's temperament. But in justice to him it must be said that

there is not much, if any, trace in *Hudibras* of a desire to make sport of honest men. What he does hold up to execration is as ardently repudiated by Milton and by Bunyan as by himself; and it is scarcely too much to say that the whole texture of *Hudibras*, the fact that underlies or suggests the caricature, may be amply substantiated from out the writings of these two great champions of Puritanism. There are indications, indeed, in the third part of the satire, which did not appear till after Milton's death, and till the first part of Bunyan's immortal allegory was in circulation, that Butler was both acquainted with, and regarded with appreciation, the works of his great Puritan contemporaries. It is but the echo of Milton's sardonic epigram—

New Presbyter is but old Priest writ large,
that we get in such couplets of *Hudibras* as—

Your Presbyterian wits
Jump punctual with the Jesuits.

Moreover, in downright vehement denunciation of the dogmatism of the Presbyterian faction and their ecclesiastical tyranny over men's consciences, Butler is rivalled and outdone by the Puritan apologist for the execution of Charles the First.

What particularly strikes one, however, in the third part of *Hudibras*, are certain reminiscences of Miltonic phrasing and diction which can scarcely be accidental. This couplet, for instance, from Shaftesbury's harangue to the house—

Not feigned, as once, but sadly horrid,
Scor'd upon every member's forehead.

has a savour of Milton's fine description of the ruined Archangel—

Deep on his front engraven,
Deliberation sat, and public care.

Our last and best defence, despair,
again, is but a variant on Milton's—

Our final hope is flat despair,
and the line—

When fiends agree among themselves,
suggests at once the

Devil with devil damn'd
Firm concord holds,

of *Paradise Lost*. Finally, the grim humour which characterises the rebel leader's address to his troops, at the outset of the war in heaven, finds a counterpart in much of Butler's military punning.

When we come to Bunyan, there are long passages in the *Pilgrim's Progress* which are worthy of parallel transcription with passages from *Hudibras*. It is impossible to read the highly diverting inquisition, which the terrified knight is put through by his disguised squire, without recalling the mutual confidences of Mr. By-ends and his companions on a similar topic.

"Why," says the unknown voice to Hudibras,

Why didst thou choose that cursed sin,
Hypocrisy, to set up in?—
Because it is the thriving'st calling,
The only saints'-bell that rings all in;
In which all Churches are concern'd,
And is the easiest to be learn'd.
What makes a Knave a child of God,
And one of us?—A livelihood.
What renders beating out of brains,
And murther, godliness?—Great gains.
What makes all doctrines plain and clear?—
About two hundred pounds a-year.
And that which was prov'd true before
Prove false again?—Two hundred more.

Compare with this amazing candour on the part of our friend Hudibras, the question which Mr. By-ends propounded for discussion : " Suppose a man, a minister or a tradesman, should have an advantage lie before him to get the good blessings of this life, yet so as that he can by no means come by them except, in appearance at least, he becomes extraordinary zealous in some points of religion that he meddled not with before; may he not use this means to attain his end and yet be a right honest man ? " The name of Mr. Money-Love, who took upon himself to settle this point of casuistry, is a sufficient guarantee for the ingenious nature of the answer returned.

It may be objected, of course, that these characters were intended by Bunyan to represent those of the Established church of his time who, by virtue of their outward profession, are reckoned as fellow pilgrims with Christian to the Celestial city. Even so, it must be admitted by every reader of the allegory that much of its delicate irony is plainly directed against the multitudes of Puritans who fell away from their faith, or held it in unrighteousness of life, to the dishonour of their profession before the world. In plain terms, too, Bunyan tells us, in others of his works, of the incredible heresies that were maintained by various sects among the Puritans, and of the abominable and criminal practices that were countenanced and encouraged through the abuse of the doctrine of Christian liberty that prevailed.

It would be difficult indeed to exaggerate the excesses of creed and conduct which Puritanism developed in the days of its dominance under the Commonwealth. When the leaders of the people made the fatal mistake of attempting to coerce the nation into godliness, they unwittingly offered a premium to hypocrisy; and men were not slow to simulate a piety that made so obviously

to their advantage. "True religion," wrote Mrs. Hutchinson, herself a Puritan, "was now almost lost, even among the religious party, and hypocrisy became an epidemical disease, to the sad grief of all true-hearted Christians and Englishmen."

Moreover, amongst honest men, strange doctrines prevailed, and strange delusions were credited on all hands. "Men lost all sense of proportion," says Mr. Gardiner, "in the intentness of their gaze upon one biblical doctrine or the other, and in their zeal to discover the Divine will they vied with each other to construe writings which bristled with metaphor and allusion as if they were acts of parliament."

It was the age of the rise of sects, we have constantly to bear in mind. The air was impregnated with the doctrines of religious toleration and liberty of conscience. All men's tongues were let loose, and all men set themselves to interpret the scriptures to their own ends, and to formulate a creed to their own liking. Of the state of things that existed at this time Milton truly and finely wrote—"When God shakes a kingdom with strong and healthful commotions to a general reforming, it is not untrue that many sectaries and false teachers are then busiest in seducing."

Further, when we read in contemporary records how sober-minded men, in parliament assembled, proposed to wipe out all memory of the past by committing to the flames the whole archives of the nation preserved in the Tower; how, in all seriousness, an agitation was set on foot for the abolition of the law courts, as being incompatible with gospel light and liberty, and for the annihilation of all titles to land, and of all degrees of honour and nobility, as inconsistent with universal parity and opposite to the communion of the saints; how the word "kingdom"

was so execrated by some of the sectaries as to be proscribed from the Lord's Prayer, and the offending petition rendered, "Thy commonwealth come," it is manifest that the age was replete with material for the satirist. When, therefore, Butler, in violation of the canons of his art, turns aside from his story, and devotes a whole canto to a satiric attack on the unprecedented anarchy which was witnessed on the death of Cromwell, he may be regarded as supplying us with the historic justification of *Hudibras* as a whole. The canto in question abounds in forcible homethrusts, and in exposure of the brazen hypocrisy and shameless duplicity of one faction or another, in their zealous endeavours after place and power at this unhappy juncture.

Beginning at the outset of the troubles, Butler relates, in language so vigorous that Dryden has not bettered it in the following, how,

Ere the storm of war broke out,
Religion spawn'd a various rout
Of petulant, capricious sects,
The maggots of corrupted texts.

and presently, how

Presbyter and Independent
Were now turn'd Plaintiff and Defendant.

But it is for the consummation of the confusion that Butler reserves his highest descriptive resources.

Toss'd in a furious hurricane,
Did Oliver give up his reign. . . .
And now the Saints began their reign,
For which they'd yearn'd so long in vain. . . .
And every individual Brother
Strove hand to fist against another,
And still the maddest and most crackt
Were found the busiest to transact. . . .

Some were for setting up a King,
But all the rest for no such thing,
Unless King Jesus.
Some were for Gospel-ministers,
And some for Red-coat世俗者，
As men most fit t'hold forth the Word,
And wield the one and th'other sword.
Some were for carrying on the work
Against the Pope, and some the Turk:
Some for engaging to suppress
The camisado of Surplices. . . .
Others were for abolishing
That tool of matrimony, a Ring. . . .
Others to make all things recant
The Christian or Surname of Saint.

Unfortunately, the passage is too long to quote in full, and suffers by mutilation.

With the exception of this long canto, the whole of *Hudibras* is taken up with the adventures and controversies of the knight and squire. But the story in reality is nought. It hangs together in a loose fashion and is interrupted by many a digression and many a wayside incident.

Who the original of Sir Hudibras was, a question which has given rise to much and varied speculation, is a matter of no moment whatever.

Let us take it, if we will, that Sir Samuel Luke, Butler's Presbyterian patron, suggested the character. With this concession the likeness ceases. The real Hudibras is a fiction of his author's brain, a caricature of a many-sided political party in the state, a travesty on chivalry, a conglomeration of all that is grotesque and contemptible, the scapegoat of ecclesiastical Presbyterianism and of the schoolmen rolled into one; and withal, he is a bumptious country justice, intoxicated with conceit of his person and office. Who is there that does

not know him by some salient feature or other of his portrait? Who is there unacquainted with the irresistible wit, the subtle humour and allusion, that sets forth at length the secular and sectarian endowments of the redoubtable knight?

For his religion, it was fit
To match his learning and his wit:
'Twas Presbyterian true blue;
For he was of that stubborn crew
Of errant saints, whom all men grant
To be the true church-militant:
Such as do build their faith upon
The holy text of pike and gun;
Decide all controversies by
Infallible artillery;
And prove their doctrine orthodox
By apostolic blows and knocks;
A sect whose chief devotion lies
In odd perverse antipathies. . . .
That with more care keep holiday
The wrong, than others the right way.

As ridiculous, and yet with the distinction of a theology of his own incompatible with his master's, Ralpho stands for the Independent party of the day, which were now hand and glove with the Presbyterians, and now at daggers drawn with them. So it is with Ralpho and Hudibras. So long as there is a common danger, they make common cause against the enemy, but with no foe in the field, they turn upon each other with mutual recriminations—

The Gibellines, for want of Guelfs,
Divert their rage upon themselves.

Like his master, Ralpho is endowed with prodigious and peculiar learning, but it is to be observed that he wears it with a difference—

His knowledge was not far behind
The knight's, but of another kind,

And he another way came by't;
Some call it gifts, and some new light;
A lib'ral art, that costs no pains
Of study, industry, or brains. . . .
He could foretell what'sever was
By consequence to come to pass;
As death of great men, alterations,
Diseases, battles, inundations.
All this without th' eclipse o' th' sun,
Or dreadful comet, he hath done,
By inward light, a way as good,
And easy to be understood.

In making this telling distinction in the squire's theology, Butler rails pleasantly at the pretensions which many of the lowest and most illiterate among the sectaries made to the gifts of prophecy and preaching.

With delightful humour again, and in mock heroic vein, he hits off one portrait after another of the heroes of the bear-baiting. These amiable characters, the butcher, the tinker, the cobbler, the fiddler—the rabble of the Puritan faction—though breaking the peace and resenting to a man the interference of the justice in their illegal pastime, are yet of the number of the elect, as the knight admits, and one and all of them "gifted brethren" in their own consideration. It is probable that in this incident Butler had in mind the action of a certain Colonel Hewson, who, on one occasion, in a fit of pious zeal, marched off to the city and put an end to all the bears that were kept for public sport. But apart from this, the hatred of the Puritan leaders generally to the common recreations of the people is well authenticated, and Butler's use of the fact admirably serves the double purpose of a romantic adventure and of satire on the rigid austerity of the sects.

In the lengthy and entertaining story of the knight's visit to Sidrophel, Butler does for astrology what Ben

Jonson had done fifty years earlier for the sister pseudoscience of alchemy. Passage after passage of the dry humour of the *Alchemist*, with its similar exposure of the accommodating principles of the sanctimonious brethren of the time, occur to one's mind in reading this canto, and leave little room for doubt that Butler had himself a close acquaintance with this masterpiece of the great classic dramatist to whom, by some real or fancied affinity of temper, he seems not unnaturally to link himself. As a skit upon the newly-formed Royal Society, too, the Sidrophel episode is interesting. Judging from his good natured banter in his poem entitled *The Elephant in the Moon*, the early transactions of these pioneers of science appear to have afforded Butler considerable diversion. But, in especial, it was the incredible superstitions that obtained in his day, and the willing ear men lent to charlatanism of every kind that he satirized here. In Sir Walter Scott's *Woodstock* we have a picture of the extent to which men in high office under Cromwell were influenced by these considerations, and the Protector's own attitude to witchcraft does not in the present instance escape flagellation. Of William Lilly, the reputed original of Sidrophel, we are told that he supplied the Government with his yearly almanacks, "which foretold victories for the Parliament with as much certainty as the preachers did in their sermons."

In the appeal to law which the knight makes for redress in his rejected love suit, and in the realistic dialogue which ensues between himself and his lawyer, Butler gives us a lively reminiscence of his own youthful apprenticeship, and holds up to derision the proverbial roguery of the pettifogger.

But, as has been said, it is neither the story as a whole, nor yet the episodes in particular, that is the best

part of *Hudibras*. For ought of plot or sequence which the narrative contains it is as good read piecemeal, or opened at random, as read through at a sitting.

Nor is it the unstinted exposure of the cant of Puritanism that appeals with most point to the reader of to-day. It is rather the universality of Butler's range that excites our admiration. The ubiquity of his wit, the gravity of his foolery, the ingenuity that turns all things to account, that lays hands on the strangest and most *bizarre* materials and, with the artlessness of genius, transforms them into a piece with the whole. So far as it is a satire on manners, a travesty on a phase of society that is played out, there is much in *Hudibras* that is obscure and cryptic, darkened to our understanding by chronological colour and allusion that have passed beyond recall.

But there is not a page of the satire that is not rich in generality, that does not afford some pregnant reflection on human life, or exhibit some conspicuous knowledge of the well-springs of human action, and, in especial, of the baser motives that in all ages alike underlie the ever-varying phenomena of human degredation. These qualities it is that are the salt of *Hudibras*; by virtue of them the book is regarded as an enduring store-house of wisdom; and to them we are indebted for many a pertinent saying, and for many a couplet that has become so incorporated into our common speech as to be no longer recognizable as an obligation to letters.

Few people probably trace their quotation home when they clinch their argument, or put the coping-stone on their wit, with some such terse and pithy couplet as these:—

Money, that, like the sword of kings,
Is the best reason of all things.

And obstinacy's ne'er so stiff,
As when 'tis in a wrong belief.

He that complies against his will,
Is of the same opinion still.

For when disputes are wearied out,
'Tis interest still resolves the doubt.

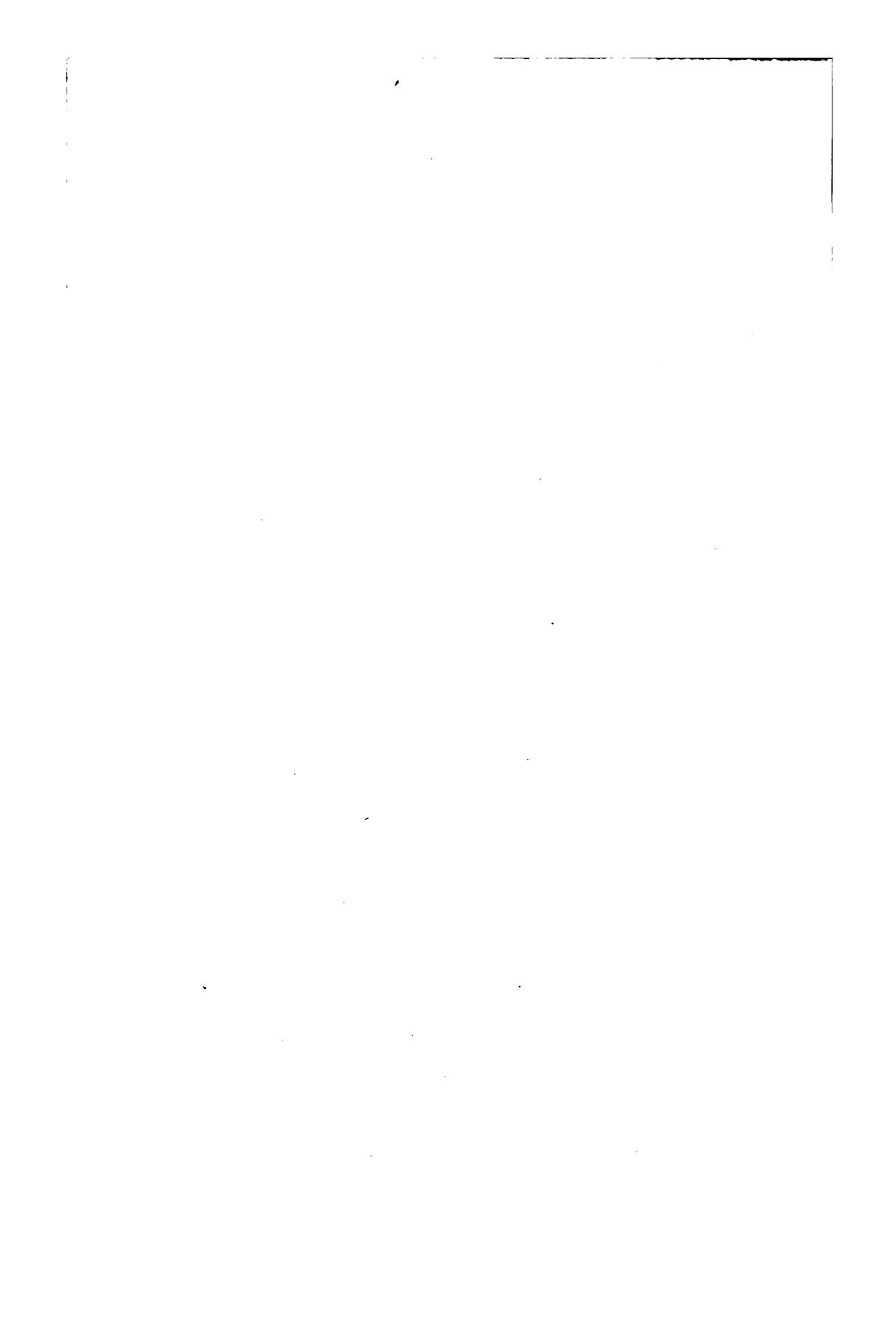
Success, the mark no mortal wit,
Or surest hand can always hit.

For whatsoe'er we perpetrate,
We do but vow, we're steered by Fate.

Compound for sins they are inclin'd to,
By damning those they have no mind to.

For a large conscience is all one,
And signifies the same with none.

It was Hazlitt who remarked of *Hudibras* that it was a book more quoted than read, and the remark is a discerning criticism on this particular aspect of the satire. Other writers have paid generous tributes to the curious and out-of-the-way learning which Butler so eminently possessed. Hume, in speaking of *Hudibras*, observed, "There is not a more learned book to be found in the compass of any language than that book." And Voltaire, a no particular admirer of our literature in general, is prodigal in his praise of Butler. "There is one English poem," he writes, "the title whereof is *Hudibras*; it is *Don Quixote*, it is our *Satyre Menisse* blended together. I never met with so much wit in one single book as in this." "A book it is," he goes on to say (and this is remarkable when we consider the eleven thousand lines of *Hudibras*), "*where we meet with more sentiments than words.*" Add to this that there is scarcely a line in this voluminous satire that does not ask annotation, and it will be seen how inadequate are the limits of a short paper like the present to do justice to the genius of Samuel Butler.



DESCRIPTION OF THE BOER COINAGE, AND OF
THE RECENT NEW FRENCH COINAGE (1898-9).

EXHIBITED BY J. BIRKBECK NEVINS, M.D., LOND.

THE Boer coinage of the Transvaal has become so scarce as to be a matter of curiosity, and it is difficult to be obtained.

The earliest coinage obtainable is the gold coin of President Burgers in 1876, made from the gold found in small quantities in South Africa before the great gold discoveries in the Transvaal, and his coin is now so rare that £8 and £10 have been the prices recently demanded for it. It is of the same weight and standard of purity as the British sovereign, but it was not styled a "sovereign," as there is no such rank as "king" or "sovereign" among the Boers. It is therefore named the "Pond," and the design upon the obverse is the profile of Burgers, surrounded by his name—"Thomas François Burgers, 1876."

In this respect it differs from every coin issued by President Kruger, who succeeded him in the presidency. For while Burgers made his name the only legend upon the face of the coin, Kruger has never placed his name upon any of his coins, but has substituted the title of the Republic—"Zuid Africander Republiek"—South African Republic, with the date of issue.

The reverse is the same in nearly all the Boer coinages, whether gold, silver, or bronze, and whether issued by Burgers or Kruger, and it consists of the coat of arms of the Republic, which is a circle surmounted by a spread eagle, and supported by six flags without any design upon

them. The centre exhibits a South African lion *couchant*, faced by a standing Boer,* carrying a rifle. In the centre of the shield is an anchor, and below it is a Boer wagon for treking over a curve representing a considerable portion of the globe. Below this coat is the motto in Dutch—"Eendragt maakt magt"—Unity makes might (or strength).

The legend upon the reverse varies with the value and nature of the coin.

The smallest gold coin is inscribed " $\frac{1}{2}$ -Pond," with the date of issue—(1897 in the coin exhibited). These gold coins have been minted in the Transvaal, but the silver coins have, until lately, been coined in Birmingham.

The largest silver coin is of the size and standard of the British crown piece, but it is not called a "crown," as that again would be against Republican principles. It is inscribed on the reverse "5 Shillings," with the date of issue. The next silver coin is inscribed "2 $\frac{1}{2}$ Shillings," with the date, and the next coin is inscribed "2 Shillings" (not "a florin"), and the obverse bears only the profile of Kruger—the legend "Zuid Afrik: Repub:" being upon the reverse, and not surrounding the profile as in the two larger silver coins. Then follows the "1 Shilling," but without the coat of arms, and lastly the two small silver coins, inscribed simply "6" and "3," surmounted by "Z. A. R.," no other nominal value, either republican or monarchical, being inscribed.

In the copper or bronze money, however, the name of the coin again appears, "1 Penny," and the coat of arms is again impressed upon the reverse, as in the case of the three large silver coins. I have not been able to see or

* The South African lion is a smaller and much less powerful animal than the North African one; has a smaller mane, and is a much less formidable enemy to be encountered. As represented in the coinage he looks almost like a peaceful friend of the armed Boer.

hear of a Boer half-penny or farthing (fourth-thing), and the pennies are so exceptionally scarce as to have a present money value in England of many shillings, the coinage having been apparently very small. As silver "was not anything accounted of in the days of Solomon" (2 Chron. ix, 20), so copper money seems to have been practically useless and worthless in the Transvaal; little apparently was coined, everything was too dear to be bought by copper, and people returning from the Cape did not trouble themselves by bringing home heavy, worthless copper money. The way in which the penny exhibited to the meeting was obtained is amusing. Someone who had, perhaps accidentally, brought home a penny in his pocket, thought to get rid of it by exchanging it for sweets or for a box of matches by means of an automatic slot machine, and dropped it in. When the money was counted the foreign penny was found, and being treated as a fraud, it came into the hands of an errand boy, who wished to change it for standard money. His employer offered him two pennies for it as a practically worthless coin, but which did, however, possess a limited interest even then, as the war, which was then threatening, though not actually commenced, was exciting increased interest in the public mind, and from the employer it came into the author's hands.

The selection of names for the Boer coinage is not without an unlooked for interest, which takes us back to a very early date in English history, and the almost prehistoric relationship between Boers and English. The anti-monarchical principles of the Boer Republic readily account for the omission of the titles of "Sovereign" and "Half-Sovereign," of "Crown" and "Half-Crown;" and the omission of the name of "Florin" from the two shilling piece may possibly have been due to its associa-

tion, in the European mind, with the reigning house of Saxe-Coburg, and, in the English mind, with the advent of Prince Albert as the Queen's husband, to whom its introduction into English coinage is due. Or the two shilling name may have been simply a continuation of the five shillings, and two and a half shillings of the larger silver coinage. But why should they have disregarded their Boer principles so far as to adopt the English shilling at all—and the penny? The explanation is probably that they simply adopted it as a matter of policy, and to assist in enabling it to pass current in the neighbouring British territory; but it also takes us back to the advent of the Saxons into England, among whom the term "Schilling" was of unknown antiquity, and was used for what may be called book-keeping purposes or conventional uses, although there never was such an actual coin. The shilling was a well-known term among the Saxons, and meant a specified *weight* of silver, not a *coin* of that special weight. Henry VII was the first English monarch who coined a piece of money to be styled "a Shilling," and it was to be of the weight and purity specified by his Act of Parliament.

The name "Shilling" was a familiar one to the Dutch, and presumably, therefore, to their Boer descendants; for a "Schelling" was an old Dutch coin, equal in value to rather more than sixpence sterling; and their adoption of the name in their new coinage, although probably really due to the commercial convenience of the name rather than to any ancestral considerations, possibly furnishes an unlooked for illustration of the common descent of the two races now so unhappily at war with each other. The name "Penny" was never associated with monarchy, but was also a Saxon name for a silver coin of the same weight and value as the old Roman "Denarius"—so many

having to be made from a pound weight (*libra*) of silver. Hence it is that our £ s. d. (pounds, shillings, and pence), trace their origin to the “*libra*” (pound) weight of silver which was to make so many nominal “shillings,” and so many actual Denarii—silver—(pennies).

ORANGE FREE STATE COINAGE.

There has never been an Orange Free State coinage. For the Transvaal, having issued a coinage both gold and silver of the same intrinsic value as the British coinage, although under different names, the two coinages were practically alike as a medium of exchange, and the Free State found all its necessities already supplied, and did not take the trouble of coining for itself.

THE NEW FRENCH COINAGE, 1898-9.

This coinage differs in many respects from that in use since the Revolution of 1789, for the emblem of the French Republic is an entirely new one, and the significance of the designs upon the coins is different from that of the previous Republican coinage. It has not, as yet, become familiarised to the British eye, and there is considerable difficulty in obtaining the gold coins, though the silver ones can easily be obtained from money-changing banks in the large towns of England.

The French Revolutionary emblem was at first a grave dignified head of Minerva, surmounted by the cap of liberty, with the motto, “*Liberté—Egalité*;” and there were various other emblems, in the different coins, to represent these two essential principles of the Revolution.

This head of Minerva, as the revolutionary emblem of France, was replaced in the time of the second empire by a head and bust modelled, it was said, from one of the

then favourites of the French Theatre, and the word "Fraternité" was added to "Liberté" and "Égalité," and upon some of the coins the Gallic cock was also a feature, though really an insignificant one in size and position. With the exception of the motto, all these features are changed in the new coinage.

In the gold 20 Franc and 10 Franc pieces the head of Minerva, with her cap of liberty, reappears on the obverse; but the cock now occupies the entire of the reverse. The legend, "République Française," surrounding the obverse; and "Liberté. Égalité. Fraternité." the reverse. The smooth edge of the larger gold coin still bears the religious legend of "Dieu protège la France," which has long been upon the gold 20 Franc coin, though it is absent from the 10 Franc gold piece; that coin being apparently too thin to admit of it, and the milled edge of the silver coinage allowing no opportunity for it.

There is no new 5 Franc silver piece, the stock of these coins still in the French mint being in excess of immediate requirements. But the emblems of France upon the new silver 2 Francs are entirely new in French coinage. A tall slender female figure is represented, with long flowing hair streaming behind her in the wind, and a long loose dress is also blown behind her so as to shew her feet as if walking briskly upon the ground. Upon her head is a small cap of liberty, and with one hand she is apparently sowing something taken from a basket held in the other. The rising sun is shown in the background, and the ground upon which she walks is slightly curved, as if to indicate a considerable portion of the world.

The legends are "République Française" and "Liberté. Égalité. Fraternité." as of old.

In the 1 Franc piece, and the 50 and 25 Centimes silver pieces, the new full-length emblem of France is on

the obverse, and an olive branch occupies the reverse, the legends being as they are on the other coins.

The bronze coinage consists of four pieces, viz.:—a 10, 5, 2, and 1 Centime, corresponding approximately with the English penny and half-penny, but not represented by any English coins for the 2 Centimes (the fifth of a penny), and the 1 centime (the tenth of a penny—less than half a farthing). The old head of Minerva and her cap of liberty, with the legend “*Republique Française*,” occupy the obverse of all the four, but the reverse has an entirely new design upon the 10 and 5 Centime pieces. A full-length female figure is seated, like the Britannia of the British bronze coinage, holding an olive branch in one hand, and half holding on her knee, and half embracing, a little boy, who holds a large ear of ripe wheat in one hand, and a hammer in the other—both being overshadowed by the French flag, and encircled by the legend “*Liberté. Egalité. Fraternité.*” On the two smaller coins this device is absent, and they simply bear the inscription 2 Centimes or 1 Centime, with the ordinary three-fold republican legend.

As specimens of Mintage, the gold coins are beautiful, and the bronze coins deserve marked praise, but the silver coinage cannot be praised—The female figure is not graceful, and leaves no impression of beauty, while the die has been so shallow as to raise the impress too little, and a very short period of ordinary wear will obliterate nearly every distinctive feature of the design; and, as a work of art, it will leave the sense of disappointment which was so strongly felt with our own Jubilee coinage.

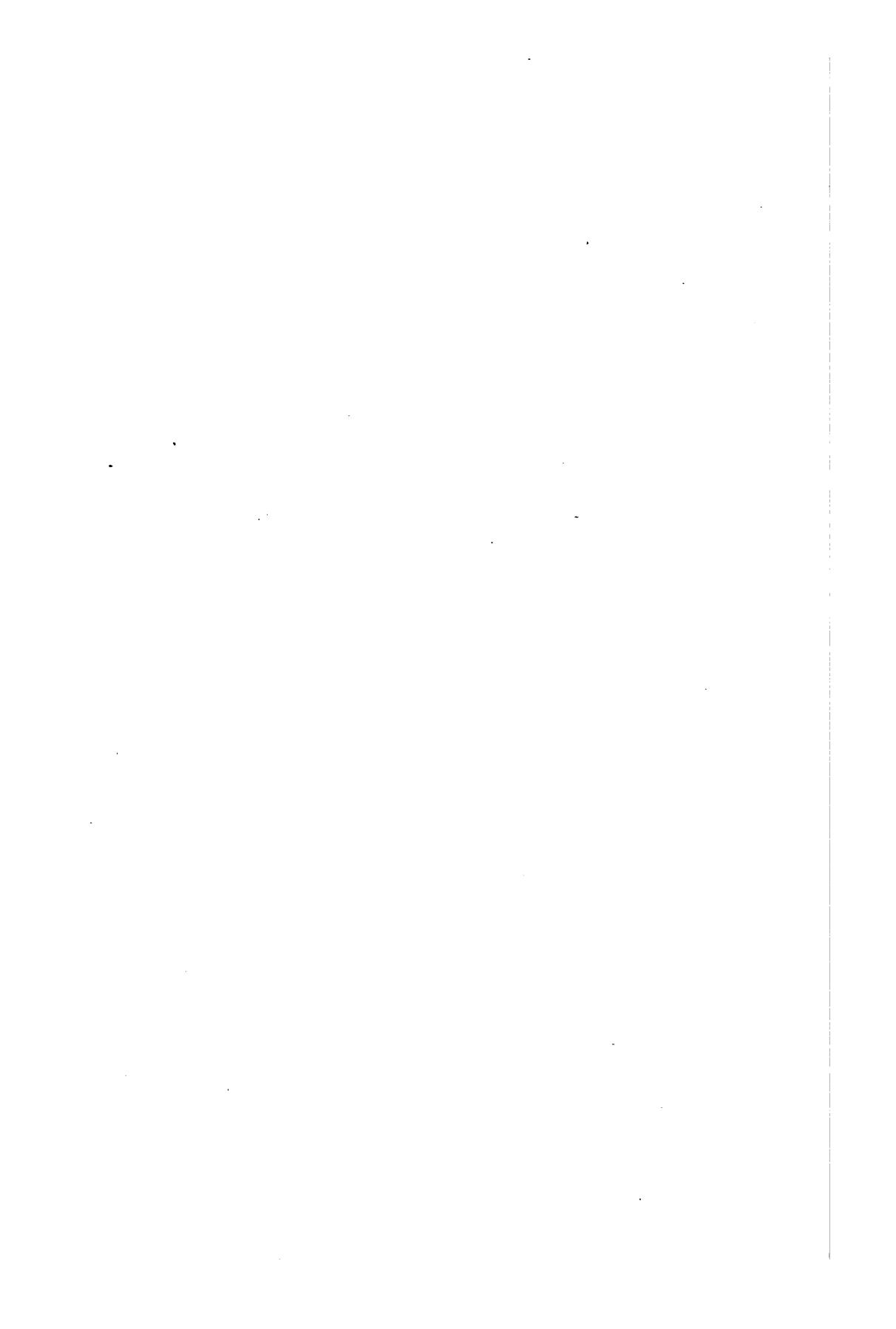
INTERPRETATION OF THE NEW DESIGNS.

As I was unable to find a description of this new coinage in the current periodical press, I applied for

information to the French consul in Liverpool, but without success, as he is a man of commercial standing but not a numismatist; and I was equally unsuccessful in my request made to the French Chancellor of the Exchequer, and afterwards to the master of the French mint. But, eventually, a leading member of the French Numismatic Society most obligingly favoured me with the following explanation.

The GOLD coins explain themselves, but the SILVER coins call for interpretation. The new female figure is a new emblem for France, and does not represent Ceres for fertility, Minerva for wisdom, or Diana for her special qualities, or any particular Greek or Roman divinity. She is represented as spreading civilization throughout the world from the rising of the sun to its setting, and the olive branch of peace on the reverse indicates another of her missions to the world. In the BRONZE coinage she is represented at rest; while the ear of wheat and the hammer in the little boy's hand, with the over-shadowing tricolor, indicate that agriculture and manufacturing industry will prosper under the protection of the French flag—a hope in which the friends of that great nation will heartily join with the designers of this new French coinage.

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